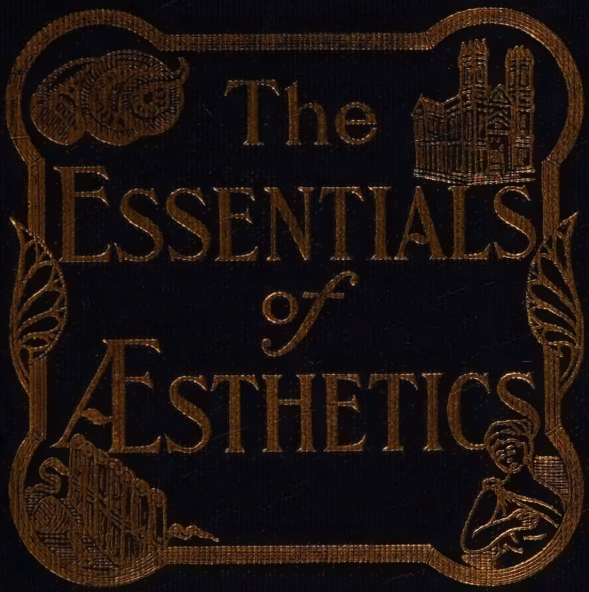
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FIG. 1.—"THE DESCENT FROM THE CROSS," BY RUBENS.

See pages 169, 193, 260, 279, 284, 290, 304.

Frontispiece.

THE ESSENTIALS OF ÆSTHETICS

IN

MUSIC, POETRY, PAINTING, SCULPTURE AND ARCHITECTURE

BY

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PREFACE.

THE object of this book is to determine for the reader, if possible, the qualities causing excellence in the higher arts, and to increase his appreciation of them. The volume has been prepared by request for readers whose time is too limited to study the minutiæ of the subject, and for teachers who need a text-book. Many extended comments upon the different historic theories, schools, and methods of art, and many analyses, explanations, classifications, arguments, and suggestions, which seemed indispensable to completeness of presentation when I was writing the work of which this is a compendium, will not be found in these pages. With this material omitted, however, together with all that might be termed merely speculative or controversial, it is believed that enough has been included to accomplish the object of the undertaking. The phenomena of the arts of the highest class have been traced to their sources in material nature and in the human mind; the different arts have been shown to be developed by exactly similar methods; and these methods have been shown to characterise the entire work of artistic imagination, from the formulation of psychical concepts to that of their most physical expressions in rhythm, proportion, and harmony. Conjointly with these subjects, the effects of all the arts together upon everything that makes for culture and for humanity have been considered in themselves, as well as in their relations to religion and to science, to both of which art is somewhat allied, and yet in such ways as to make it important that the three should be differentiated.

WASHINGTON, D. C.,
November 21, 1906.

GEORGE LANSING RAYMOND.

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The word *æsthetics* is traceable to a work termed "Æsthetica," published in Germany in 1750, by A. G. Baumgarten. The word was derived from the Greek αἰσθητικός meaning "fitted to be perceived," and is now used to designate that which is fitted to the requirements of what philosophers term *perception*; in other words, fitted to accord with the laws, whether of physiology or psychology, which make effects appealing to the mind through the organs of perception—*i.e.*, through the senses—satisfactory, agreeable, and, as we say, beautiful. If such effects need to be "fitted" to be perceived, they, of course, need to be made to differ from the condition in which they are presented in nature. That which causes them to differ from this is *art*. *Æsthetics* is the science of the beautiful as exemplified in *art*. The latter has to do with the processes through which a sight or a sound may be "fitted to be perceived"; the former, with the effects after it has been put through these processes. One cannot be *artistic* without being able to design and produce; he may be *æsthetic*, when able merely to appreciate and enjoy the results of design and production.

The German term for the science, which some have tried to introduce into English, is *æsthetic*. But this term, except when employed as an adjective, seems to be out of analogy with English usage. According to it, the singular ending *ic*, as in *logic* and *music*, commonly designates some single department in which the methods of the science produce similar results. The plural ending *ics*, as in *mathematics*, *physics*, *mechanics*, and *ethics*, commonly designates a group of various departments, in which similar methods produce greatly varying results. The many different departments both of sight and of sound in which can be applied the principles underlying effects that can be "fitted to be perceived," seem to render it appropriate and important that in English the science treating of them should be termed *æsthetics*.

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THE ESSENTIALS OF ÆSTHETICS.

CHAPTER I.

NATURE, ART, AND FINE ART.

Introduction—Art is a Method—Artlessness and Art Illustrated—Differing not as Originality from Imitation, nor as the Natural from the Unnatural—But as an Immediate Expression of Natural Instinct from that of Human Intelligence—Art-Products not Creations but Rearrangements of Nature—And also Results that are Distinctively Human—The Fine or Higher Arts—Distinguished from Others by Belonging Most Finely and Distinctively to Nature—Therefore Emphasising Natural Appearances—Form Essential to the Higher Arts—Different Classes of These—Study of Nature Essential to Success in Producing Them—Arts that are Most Finely and Distinctively Human Address and Express Intellect through Sound or Sight—Human as Distinguished from Animal—Expression as Developed from Possession of Human Vocal Organs and Hands—The Higher Arts are also in the Most Fine and Distinctive Sense Made—How to Class Landscape-Gardening, Decoration, Dancing, Pantomime, Elocution, and Dramatics—The Humanities—External Products Necessitated in Music—Poetry—Painting and Sculpture—And in Architecture.

KNOWLEDGE in this world grows by way of accretion. In order to be sure about many things that we fail to know, it is necessary to start with a few things that we do know, and to these few add and relate the others in such a way that the connections between all shall seem inevitable. In accordance with this principle,

let us begin the discussions of this volume with certain facts concerning art which, if not usually known, will at least be readily recognised to be true the moment that they are stated.

When we say that a man has *an art* or *the art* of producing effects of any kind, we mean that his words or deeds manifest a certain method. *Works of art* are products revealing this method. They may not reveal it to a first glance; they must to careful inspection. Otherwise none could distinguish them from other works and designate them by a special term.

What is this method? A child talks to us with grace in her movements and sweetness in her voice, and we admire what we term her *artlessness*. A grown woman, an actress, perhaps, produces almost identical effects that seem equally pleasing, but what we admire in her we term her *art*. What is the difference between an absence of art and a presence of art, as indicated in these two cases?

We cannot fully answer this question by saying merely that the child's actions appear to be *spontaneous* or *original*, and that the woman's appear to be *imitative*. The very actions of the child which the grown person imitates may themselves be imitative. What the woman does that is different from the action of the child is to produce the imitations according to a different method. Nor can we answer the question by saying that the child's actions are *natural* and the woman's *unnatural*. Very often, that which most pleases us in the woman is the fact that her actions are similar in form to those of nature. Yet we term the result *art* because we recognise that they are produced not according to the method of nature—in this case, of a child's nature,—but according to a different method.

FIG. 2.—EFFECT OF DISTANCE ON MAGNITUDE, LIGHT, CONTRAST, AND DETAIL, BY J. W. STIMSON.

See pages 86, 88, 89, 90, 92, 93, 94, 218, 262, 300, 315, 381.

In what now consists this difference in method? Is it not in this? We know that a mature woman's natural instincts would never prompt her to express herself in the child's way; and that therefore her childish words and deeds, while expressions natural enough to a very young person, are not so to one of her age. They are expressions, therefore, of something which nature has presented to her, and which she re-presents to us. As the result, which we term *art*, is a combination of what comes, in the first place, from *nature*, and, in the second place, from a *human* being exercising the distinctive traits of the human *mind*, we may say that, in this case at least, art is *nature made human*. The term *nature*, as used thus, is to be understood as including not only non-human but human nature, so far as a man's actions or utterances are produced instinctively, as we say, and therefore are not a result of conscious human intelligence or contrivance. The term *human* is to be understood as applying to every effect that is produced as a result of conscious human intelligence or contrivance; and *made* is to be understood as including all such ideas as might be expressed specifically by terms like *shaped*, *arranged*, *applied*, *combined*, *reshaped*, *rearranged*, *reapplied*, *recombined*, or, to repeat the term already used, *re-presented*.

But is not what has been affirmed of one illustration of art true in all cases? In the first place, are not all art-products necessarily reproductions of that which *nature* furnishes, though, of course, in different degrees and ways? A man can absolutely create nothing. He can merely put into new shapes and use with new combinations and applications that which already exists in the world about him. Every one must have noticed the unmistakable absence of any appearances that fail to re-

semble those of the earth in all attempts on the part of men to picture spiritual beings or a place of spiritual existence. In poems and dramas, the characters represented, although Homeric gods or Miltonic angels, speak and act in ways showing that the artist's ideas concerning them have been modelled upon forms natural to men and women of this world. Even in music and architecture, the principle holds good, though in a more subtle way. There would be no melodies if it were not for the natural songs of men and birds or for what are called "the voices of nature"; nor would there be buildings were there not in nature rocks and trees furnishing walls and columns and water-sheds, to say nothing of the innumerable forms suggested by the trunks, branches, leaves, flowers, and other natural figures which architectural details unmistakably imitate.

In the second place, is it not true that in all cases art results from influences that have been exerted upon nature by man as the possessor of a *human mind?* A choice specimen of a coral is not a work of art, because it is produced by a polyp. Neither is the universe as a whole, nor anything in it that merely grows to be what it is, because this is attributable to the Almighty.

In this book, we are to deal not with all the products of art, but with a particular class of them, to some of which, among other terms, that of *the fine arts*, and to all of which the term *the arts* is applied. These terms indicate that those who first used them intended them to refer to products manifesting particularly fine and distinctively artistic qualities. What products are those which, in the most fine and distinctive sense, may be said to belong to *nature*, to be *human*, and to be *made?*

First, what products may be said to belong, in the

most fine and distinctive sense, to nature? Must they not be those, which, other things considered, appear to be the least changed from the state in which they are found in nature? As a first step toward the discovery of these, notice that all possible art-products can be divided into two classes—those in which appearances, whether of nature or of any kind, are not essential, and those in which they are essential. In the former class we may place all those compounds and constructions, from the lightest fluids and fibres to the heaviest instruments and machines, which belong to what are termed, when chief reference is made to the motive, the *useful arts;* when to the method, the *operative* or *mechanical arts;* and when to the effect, the *technic* or *applied arts.* In the class contrasted with these—the class in which the appearance or the outward effect upon the eye or ear is of chief importance—belong what are termed, when chief reference is made to the motive, the *ornamental arts;* when to the method, the *arts of design;* and when to the effect, the *æsthetic arts.* In a general way, these arts may be said to include all products, alike in kind, that range between a carved penholder and a palace, between a jew's-harp's humming and an overture. Of course, in certain regards, the æsthetic arts may be as useful as any that are termed useful; but the æsthetic utility is always such as produces not a material but a mental result, and even no mental result except indirectly through an effect upon the senses.

In all æsthetic art, *form* is an essential characteristic. The word is from the Latin *forma*, meaning an *appearance*, used in the sense of an outward effect produced upon the eye or the ear; and, in this sense, is applied especially to what presents a definitely outlined or con-

crete effect. All art-products, in one sense, have form, but only in the degree in which the appearance or outward effect is essential can we say that form is essential.

This statement implies—what needs to be noticed next—that there are different degrees and classes among the æsthetic arts. House-painting cannot rank as high as landscape-painting nor masonry as sculpture. What are the characteristics of the products for which we are in search—of products which, in the finest and most distinctive sense, are those of nature? The very phraseology of the question answers it. They are the products which have forms or appearances the most like those of nature, products which we could unmistakably define as *forms of nature* made human. Unfigured silk, however ornamental, is not one of these products because it is not, or has not, necessarily, an appearance in any sense attributable to nature; nor is a steam engine, however elaborately its parts may be mounted and polished. To have a form of *nature*, outward effects upon the eye or ear must suggest, like the carving of a man's head, the picture of a tree, the dialogue of a drama, the bird-trill of a song, certain outward effects of nature upon which they have been modelled. Only to classes of products containing suggestions like these can terms like *the fine arts* or *the arts* be applied by way of distinction.

That this is so seems to be universally recognised in practice at least, if not in theory. Who does not acknowledge that one characteristic of all great artists, especially of those who are leaders in their art, is the faithful study that they give to nature. We may not admire the social customs of ancient Greece that allowed its sculptors frequent opportunities to observe the unclothed forms of both sexes; we may shrink from believ-

ing the story of a Guido murdering his model in order to prepare for a picture of the crucifixion; or of a David coolly sketching the faces of his own friends when they were put to death amid the horrors of the French Revolution; yet, in all these cases, there is an artistic lesson accompanying the moral warning. It was not in vain that Morland's easel was constantly surrounded by representatives of the lower classes; that Hogarth always had his pencil with him on the streets and in the coffee-houses; or that, morning after morning, Corot's canvas caught its colours before the eastern sky grew bright with sunlight. Or, if we turn to literature, it is not an insignificant fact that Shakespeare and his contemporaries who gave form to the modern drama, as well as Goethe, who records in his "Wahrheit und Dichtung" the way in which he spent his youth in Frankfort and his age in Weimar, were for years the associates of both audiences and actors in city theatres; or that Fielding, who gave form to the modern novel, was the justice of a police court. High art distinctively involves the use of a form of nature—a form of this in the sense of being perceptible in the real world, or, at least, of being suggested by what is perceptible there.

Now let us ask what arts can be said to be, in the highest and most distinctive sense, *human*. These, of course, must be those with the production of which men associate the highest results of human intelligence. As a rule, they do not associate such results with any product—no matter how much it may suggest of ornament, design, or æsthetics—which appeals to attention through merely one of the lower senses of touch, taste, or smell. The arts addressing or expressing that in man which is most finely and distinctively intellectual and spiritual

are usually conceded to be those alone that appeal to either sight or hearing.

But even from these arts, in order to satisfy the conditions, those products must be excluded which cannot be clearly attributed to a *human* being as distinguished from an animal. In trying to determine exactly what these products, and the classes to which they belong, are, it would evidently be illogical to start by theorising with reference to such subtle differences as are dependent upon internal mental conditions or capacities. These differences can, at best, be only indirectly inferred. Actual observation never starts with them; and we should start where it starts, namely, with something directly perceptible, which itself is the occasion of their being inferred—with something belonging, therefore, not to the hidden psychical but to the perceptible physical nature. What then are the physical differences—not all of them but those connected with the reproduction of effects of sound and sight—which distinguish the human from the merely animal body?

The question is readily answered. They are the *vocal organs* and the *hands*. A man can produce such variations of intonation and articulation as to enable him to represent in a definite vocal form well-nigh every object of thought and phase of feeling. He can, therefore, select for imitation such sounds of nature, or can originate such sounds, as are appropriate for expression, and he can use these as in language. The bird can sing and the beast can roar; but neither can do both; nor is there any proof that either is in the habit of producing new sounds in order to indicate newly discovered distinctions between thoughts or feelings. Again, the structure of a man's hand is such that there is hardly any limit to the variety

of objects that he can make. Therefore, he can select for reproduction such phases of the products of nature appealing to sight as are appropriate for expression: and he can so vary the objects that he makes as to cause them to be very differently expressive. But the animals cannot with their mouths, beaks, paws, or claws construct a single written character or picture of such a nature as to indicate clearly any particular thought or any particular scene suggesting it. They can scarcely construct even an implement or a machine showing unmistakably that it was designed to be a means of accomplishing an end conceivable only as a result of a consecutive and complicated mental process. Our general conclusion here must be that those arts are in the finest and most distinctive sense *human* which, in some way, are connected with expression through the use of the human voice and hands.

There is one further question to be answered before all that is suggested in the definition of art as *nature made human* has been considered. The question is this: What products of nature connected with expression through the use of voice or hands can be said, in the finest and most distinctive sense, to be *made?* Of course, the answer must be that they are such products as reveal most clearly that they are not the sole results either of material growth or of mental impulse; in other words, either of natural formation or of natural human expression through the use of voice or hands. This distinction will show us why it is that landscape-gardening and various forms of what is termed decorative art, which are more or less subordinated to the methods of natural formation in the material world; and also dancing, pantomime, oratorical delivery, and dramatic representation, which are more or less subordinated to methods of natural

expression through the use of the human body, are not usually put into the same class as music, poetry, painting, sculpture, and architecture. At the same time, all the arts just mentioned have many features in common, and any thorough treatment of the last five must involve some treatment of the others. For one thing, they all belong to the class which is termed "the humanities." That is to say, they all are arts through which a man can cause forms, otherwise often merely material in their influence, to thrill and glow with emotion and meaning; through which he can show himself able to breathe, as it were, something of that sympathetic and intellectual life which has already given humanity to his own material frame.

A few words more may be needed in order to make clear to the reader in what sense it is true, as just intimated, that the particular arts of music, poetry, painting, sculpture, and architecture, besides being developed from natural appearances, and from methods of human expression through the use of voice and hands, necessitate a product which, in the finest and most distinctive sense, may be said to be *made*, *i. e.*, a product external to oneself. Notice this, first, as exemplified in music. Cannot a man sing without constructing a product external to himself? Certainly he can, and so can a bird; but if a man could do no more, he could do nothing entitling music to be placed in a class different from that to which elocution and dramatic representation belong. A melody is, in the finest and most distinctive sense, a natural form made human in the degree alone in which it is unmistakably a product of the *art* of music. What is such a product? A composition that is a result of labour and practice. Aside from its usually involving an external

writing in musical notation, it is a development of a complicated system of producing notes and scales and chords, not only with the human voice, but with numerous instruments, invented, primarily, so as to imitate every possibility of the human voice, all these working together in accordance with subtle laws which, as a result of years of experiment, men have discovered and learned to apply. Humming might be called a form of natural expression, therefore, of nature as manifested in a man; but a symphony is more than this. It is a very elaborate development of the form in which the man has hummed. It involves, therefore, especially in connection with the necessity for a written score and for manufactured instruments, the existence and elaboration of that which is possible to only an external product.

Similar facts are true of poetry. A man like an animal could express his actual wants in a few different sighs, cries, grunts, and hisses. But from these he develops, in their various forms, the innumerable words and phrases that render possible the nice distinctions of language. These words and phrases are often freshly invented by the poets, and they are almost always invented as a result of what is recognised to be the poetic tendency latent in all men. As for poems considered as wholes, their metres or rhymes are never produced as immediate subjective utterances, such as we hear in ordinary speech. They are always the work of the imagination, bringing together the results of experience and experiment, according to the method termed composition. In other words, even aside from the fact that they are usually written or printed, but necessarily when considered in connection with this fact, they evidently involve the construction of an external product.

Passing on to painting, sculpture, and architecture, these all appeal to sight. How does a man express to sight what is passing in his mind? Undoubtedly by his postures and the gestures of his hands, feet, head, and countenance, and by these as we see him when standing alone not only, but when surrounded by other persons and things. Postures and gestures, though never as definitely intelligible as the sounds of the voice, are, nevertheless, in as true a sense natural forms of communicating thought and feeling; and may be developed into the subordinate art of pantomime, just as natural forms of utterance in sound may be developed into the art of speech. But pantomime is no more painting or sculpture than speech is poetry. It is when a man becomes so attracted and charmed by the methods through which he naturally expresses thought in pantomime that he begins to make an external product, embodying thought through like methods,—it is then that he begins to work in the sphere of the higher arts. Moreover, when he does this, he does not pose with his own figure, as in dramatic representation, but he makes other figures pose—that is to say, he draws, colours, shapes, and combines the different parts of the figures of other men, either alone, or in connection with their fellows or with objects of nature animate or inanimate. Besides this, too, very often, without making use of any human figures, he draws, colours, shapes, or combines other animate or inanimate objects. In other words, instead of conveying a thought or feeling through a posture of his own body, he conveys it through representing a posture in a pictured man's body; and if his conception have reference to surrounding persons and objects, he represents these latter as surrounding the pictured man;—clouds, rain, and a waste,

for instance, if his idea be the same as that expressed in lines like these:

> The clouds have broken in a dreary rain
> And on the waste I stand alone with heaven.
>
> *Lady of Lyons: Bulwer.*

Or, if his idea involve nothing that needs to be represented by human figures; if it be something that could be conveyed by his pointing to animate or inanimate objects, were they present in a certain location, then he leaves the human figures out of his picture, and reproduces merely these objects—darkness, rain, wind, a clinging vine, and dead leaves, for instance, if his idea be like that expressed in the following:

> The day is dark and cold and dreary,
> It rains and the wind is never weary;
> The vine still clings to the mouldering wall,
> But at every gust the dead leaves fall.
>
> *The Rainy Day: Longfellow.*

Paintings and statues are thus *external products* that are embodiments of distinctively human methods of expression.

All that has been said may be acknowledged, so far as the statements are applied to products of painting and sculpture. But how, it may be asked, can they be applied to those of architecture? The external character of its products is, of course, evident; but it has other characteristics, which cause many to doubt whether, in important regards, it does not differ too greatly from music, poetry, painting, and sculpture to admit of its being placed in the same class with them. Under all these latter arts, it is said, there are subjective modes of expression, like humming, speaking, and gesturing. Is

it so with architecture? Some seem to doubt this. But why? Architecture certainly represents the ideas of protection, support, and shelter, and these are ideas which it is by no means impossible or unusual to represent, as subjectively experienced, by gestures. But, it is said again, architecture is always developed from an external product,—a dwelling. But is not the same true of the other arts? Artificial resonant sounds, spoken and written language, hieroglyphic drawings and carvings are conditions that antedate music, poetry, painting, or sculpture, no less than house-building antedates architecture. House-building, moreover, is no less truly a form of natural expression than are these others. As will be shown in Chapter VI., almost all the different architectural styles of which we know were developed primarily from a tendency to imitate, in a more enduring material, the appearances of structures erected by the primitive man in order to give expression to his nature, exactly as does the bird or the beaver when constructing his nest or his dam.

CHAPTER II.

BEAUTY.

Limitations in the Sights and Sounds, the Thoughts and Emotions, and the External Products with which Art Can Deal—The Sights and Sounds Must Have Interest, Charm, Beauty—Beauty as Attributed to Form as Form—To Form as an Expression of Thoughts or Emotions—To Both these Sources Combined—Examples—Complexity of Effect Characteristic of Beauty—In Sounds—In Lines and Colours—Besides Complexity, Harmony of Effect upon the Senses is Essential in Beauty; Produced through Like or Related Vibrations in Tones and Colours—Through Like or Related Divisions of Time or Space in Rhythm and Proportion—Unity of Effect upon the Brain Necessary to Beauty—Mind Affected Irrespective of the Senses—Senses Affected from the Mind-side—Complexity Even in Form Recognised and Analysed by the Mind—Imagination Frames an Image as a Standard of Beauty—Mind is, therefore, Affected and Active when Beauty is Recognised—Exemplified in Music—In Poetry—In Arts of Sight—What is Meant by Harmony of Effects upon the Mind in Music or Poetry—In Arts of Sight—Further Remarks on Complexity and Unity—Definition of Beauty—What it Leaves Unexplained—Applies to Natural as well as to Artistic Forms—To Arts of Sound as well as of Sight—Relation of this Definition to Other Definitions—Taste—Its Cultivation.

IN the preceding chapter an endeavour was made to show that art of the highest or finest quality involves three things: first, a reproduction of the phenomena of nature, especially of its sights and sounds; second, an expression of the thoughts and emotions of the artist; and, third, an embodiment of both these other features in an external product like a symphony, a poem,

a painting, a statue, a building. The question now arises whether we should not make further limitations with reference to the sights or sounds of nature with which the highest arts have to deal, with reference to the phases of thought and emotion which they express, and with reference to that which characterises their products.

The question, as applied to sights or sounds, suggests at once that when a man, not for a useful but, in accordance with what was stated on page 6, for an æsthetic end, reproduces these, he must do so mainly because something about them has interested, attracted, and, as we say, charmed him. There is one word that we are accustomed to apply to any form, whether of sight or of sound, that attracts and charms us. It is the word *beautiful.* We may say, therefore, that the highest arts reproduce such outward effects of nature as are beautiful. For a sufficient reason then did the Abbé Du Bos in 1719, in his "Réflexions Critique sur la Poésie et la Peinture," first apply to these arts the term "Les Beaux-Arts." Afterwards, in 1793, painting, sculpture, and architecture together were taught in France in an "École des Beaux-Arts," and music was added to these when an "Académie des Beaux-Arts" was established. Poetry was left out; but it is always included in what, in our own country, as well as in France, is termed "Belles-Lettres." To-day, everywhere, it seems to be conceded that arts of the highest class should reproduce mainly, at least, and some seem to think solely, such phenomena of nature as are beautiful. It becomes important, therefore, for us to ask here, What is beauty?

All men acknowledge it to be a characteristic of form, but they differ in the degree in which they consider it this. Some, for instance, attribute it to form considered

in itself alone; and there is some justification for their theory. As ordinarily used, the word beautiful frequently applies to that which exists in mere appearances aside from any thought or feeling expressed through them. One may say that, to men generally, fabrics of a single hue hanging in a shop-window, two or three of different hues thrown accidentally together, and certain figures, even rooms, on account sometimes of their colours, sometimes of their proportions, sometimes of both, are termed, and properly termed, *beautiful*. When so used, the word does not refer necessarily to any human thought or feeling that men recognise as being suggested through the forms or by them.

At other times, however, the word seems to refer to such thoughts or feelings almost exclusively, and this gives rise to the theory that beauty is found in the expression of these. It, too, is a theory not without justification. Let one come upon a woman with a deformed figure and homely countenance, dressed in most inharmonious colours, and in a most illy proportioned room; yet, if she be engaged in the utterance of some noble sentiment, or in the performance of some sublime act of charity, or of self-sacrifice, the expression of the motive in her face and frame, together with her surroundings, may be so accordant with the demands of his soul as to transfigure the mere forms, and prepare him to believe and to say in the most emphatic way that he has seen what is beautiful.

At the same time, probably, most men will be willing to admit that in the case neither of the fabric nor of the woman does the beauty exhibited manifest all the elements capable of rendering it complete. They recognise that the beauty of form in colours or outlines could be

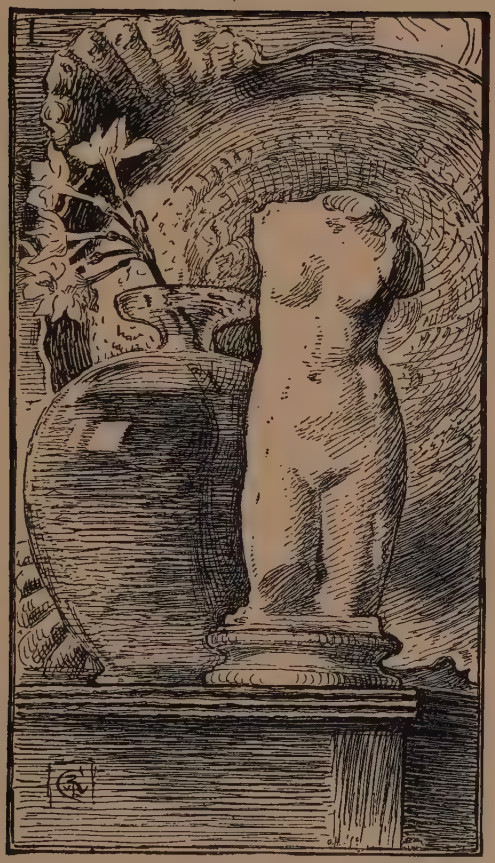


FIG. 3.—LIGHT AND SHADE.—W. CRANE.

See pages 89, 224.

enhanced by supplementing it with more beauty appealing to the intellect, and that the beauty of expression in the deformed woman could receive a more harmonious setting if accompanied by more beauty of colour and outline. So far as appearances appeal to one's æsthetic nature, it is preferable to see a beautiful woman doing a beautiful deed, to seeing one not beautiful doing it. It does not seem to be true, therefore, that beauty can be referred exclusively either to form, or to significance of which the form is the expression.

Notice one or two more illustrations of this fact. Queen Louise of Prussia, the mother of the first Emperor William, was one whose form and face were of such a nature that, owing solely to their effects upon the organs of sight, they would cause almost any observer of ordinary taste, however ignorant of whom or of what she was, to declare her to be beautiful. But, behind and above the attractions of her mere appearance, this gave expression to such a character, to such mental and sympathetic traits, that none of her own family, intimately acquainted with these, would have been willing to admit that she was beautiful to others in as deep and spiritual a sense as to themselves.

Again, there are certain combinations of colours and sounds, say a flag like that of Italy or a tune like the "Austrian National Hymn," the effects of which, in every land, without something to interfere with the normal action of the eye or ear, are recognised to be beautiful. Yet it is possible that, owing to certain associations of ideas, or to certain suggestions excited by their effects upon the mind, the indisputable beauty both of the flag and of the tune may fail to appeal to some. Did the Italian flag seem beautiful at the time of the unification

of Italy to the adherents of the Pope? or the Austrian hymn seem so to the Italians when Austria seemed their oppressor?

It has to be acknowledged that these illustrations merely touch the surface of the subject. Nevertheless, they contain suggestions that are important. Notice particularly the suggestion that complexity of effects is characteristic of beauty. It is attributed, in each instance, so far as it is complete and ideal, not to a single effect, as to one upon the senses, or to one upon the mind, but, necessarily, to more than one, often to many effects conjointly exerting both a physical and a psychical influence. In view of this fact, we are naturally prompted to ask whether complexity of effects, which, so far, has been treated as merely incidental to complete beauty, can be considered essential to it.

Let us apply this question, first, to effects of beauty that are experienced solely in the physical organs of hearing and sight, and in these organs as they are presented in their rudiments, *i. e.*, in elementary sounds, lines, or colours. When is a sound beautiful? Few would think of answering this except by saying, when it is a blending together, in accordance with the laws of harmony, of several sounds, as in melodies or chords, or series of chords, —in other words, when the sound is not simple but complex. But let us be accurate in this matter. Is it not true that a single sound, like the solitary, unvaried note of a bird or of a prima donna, is sometimes beautiful? Certainly it is. But when is it beautiful? Of course, when it is musical. But when is it musical? As all physicists know, in the degree in which it is complex; and complex under such conditions that all its component effects work together in ways causing them to fulfil the

same laws of harmony that are fulfilled in chords or series of them. What is meant in saying this will be explained in Chapter XVII. At present the fact needs only to be stated.

A similar fact is true with reference to lines. When is a line beautiful? Who, if asked this, would not answer, when it outlines a figure? And when does it outline a figure?—When it is a combination of many lines of different directions; and, therefore, when its effects are *complex*. But here again it may be asked, Is a single line never beautiful? And again we may answer, "Certainly." But, if so, the line is never perfectly straight; it is never a line having the simple effect of only one direction. The line of beauty is a curve; in other words, it has a complex effect. Nor is it really beautiful even then, except when its different sections are conditioned and related so as to produce effects which, for reasons that cannot be given here, are recognised to be harmonious. (See Chapter XVI.) The same is true of colours also. Sometimes a single colour seems beautiful. But when this is the case it would not be difficult to show that it seems so on account either of the contrast between it and surrounding colours, or else of the play of light and shade on its surface; and both these effects are really effects of complexity. (See Chapter XVIII.)

If sounds, lines, and colours, even when considered in their elements, owe their beauty to a complexity, often to the degree of the complexity, in connection with which different effects are blended harmoniously, this must be still more true of these elements when combined in what all recognise to be the extremely complex products of nature and of art. What is meant when it is said that complexity of effects must be blended harmoniously?

in other words, what is harmonious blending? An answer to the question can be found in no better way than by recalling the discoveries of the scientists as a result of analysing harmony as it appears in music. Some of these discoveries are explained in Chapter XVII. of the present volume. In this place, it is necessary to say merely that harmony has been found to be produced invariably by no other tones or colours except such as are traceable to the same or to multiples of the same number of vibrations *per second*. This is true of all the notes of the same chord or scale, and of all the shades or tints of the same or of complementary colours. In other words, it has been found that harmony is a result of a unity produced by grouping together effects—*i. e.*, of sound-waves or of colour-waves—that are alike; or are multiples of others that are alike.

A similar principle is exemplified in the more perceptible effects of rhythm, and of proportion, both of which are acknowledged to be very important factors in the production of artistic beauty. Rhythm is a result of making, by series of noises, or strokes, certain like divisions of time—small divisions, and exact multiples of them in large divisions. But the moment that the smaller divisions become so numerous that the fact that they exactly go into the larger divisions is no longer perceptible—as, often, when we hear more even than eight or ten notes in a musical measure, or more than three or four syllables in a poetic foot,—the effect ceases to be rhythmical. A like fact is true of proportion. Owing to the very great possibilities and complications of outlining, as in squares, angles, and curves, its laws are intricate and difficult to apply; but, as is shown in the volume of the author entitled, "Proportion and Harmony of Line and Colour in

Painting, Sculpture, and Architecture," the effects of proportion all result, in the last analysis, from exact divisions and subdivisions of space in every way analogous to the divisions and subdivisions of time that produce rhythm. (See also Chapter XVIII.)

Now the question comes, Are all the effects entering harmoniously into that complex result which constitutes beauty traceable to such as influence merely the physical organs of the ear or eye? In answer to this it may be stated, first, that it has been discovered that not only do the nerves of the ear and eye vibrate as affected by sound and sight, and communicate to the brain intelligence of particular degrees of pitch and hue as determined by the rates and sizes of the vibratory waves, but that in addition to these the nerves, as well, that constitute the substance of the brain vibrate and thus give rise to thoughts and feelings; and, not only so, but that the vibrations of the nerves in particular parts of the brain give rise to thoughts and feelings of a particular character; such, for instance, as those connected with particular exercises of memory in recalling general events or specific terms. These facts have been ascertained through various observations and experiments in connection with the loss or removal of certain parts of the brains of men or of animals, or with the application of electricity to certain systems of nerves accidentally or artificially exposed or else naturally accessible. Of course, such discoveries tend to the inference that all conscious mental experience whatsoever, precisely as in the case of sensations excited in the organs of the ear and eye, are effects of vibrations produced in the nerves of the brain. If this inference be justified, the line of thought that we have been pursuing apparently justifies the additional inference that all conscious mental

experiences of the beautiful are effects of harmonious vibrations produced in the nerves of the brain.

In holding this theory, however, let us not neglect noticing, as do many of its advocates, certain other facts. Through the experiments of hypnotism, it has come to be acknowledged that the outer senses can be completely deadened and yet the inner processes of intelligence kept in a state of activity; and not only so, but that sometimes, merely at the mental suggestion of a hypnotiser, irrespective of any actual sights or sounds of the kind,—irrespective therefore of any possible vibrations in the outer air or ether to account for vibratory effects upon the physical organs of the senses,—the one hypnotised is made to see colours or to hear musical harmonies.

Now, in such cases, either actual vibrations take place in these organs, or else they do not take place for the simple reason that vibrations are not necessary to the result; and whichever of these theories we adopt, we are forced to the conclusion that the effects of beauty are dependent upon influences operating in what we understand to be the sphere of the mind. The influences are awakened by the hypnotiser irrespective of any appeal through the outer senses, and, when awakened, they operate so powerfully that they produce either actual vibrations in the senses, or, if not, at least results identical with those caused by actual vibrations. Assuming now what it does not seem possible to doubt—namely, that the existence of these vibrations constitutes the substance of that of which we are conscious in æsthetic effects; that these vibrations are, so to speak, indispensable to the operation of the battery of the brain, which without them cannot communicate its peculiar influence to intelligence,—what are we to infer, when we find that

they can be set in motion not only from the physical side, but—as in cases of hypnotism not only, but also of dreams about music and painting, etc.—from the non-physical side? We must infer that on this latter side also the same vibrations exist, or, if not so, a force capable of causing the same; and that the sphere in which we are mentally conscious of the effects of the vibrations, or the sphere of personal consciousness, as we may call it, occupies a region between the material and what we may term —because we cannot conceive of it as otherwise—the immaterial. Add to this another fact universally admitted, which is that vibrations harmonious in the sense that has been explained are particularly agreeable, whereas inharmonius vibrations are particularly disagreeable; and why have we not, from modern science, a suggestion of the possibility of there being exact truth in the theory of Pythagoras and the earlier Greeks, who held that the mode of life which is most nearly normal, true, divine, blissful, beautiful, is not only physically—as on the side of the eye and ear—but spiritually—as on the side of the mind—a mode of harmony, a mode fitted to produce a literal "music of the spheres"? As has been said, our minds are conscious of experiencing from a world which we can see and hear harmonious effects which are identical with effects coming from a world of which we can only think and feel. Now, if by scientific analysis we can ascertain the method of producing harmonious effects which come from the one world, why have we not a right to argue that it is through the same method that they come from the other? (See the Appendix to this volume.)

Let us notice some further considerations serving to indicate the accuracy of the view that has here been taken. Observe, first, that the very complexity and unity that

have been shown to be essential to beauty of form can be recognised by only the exercise of distinctively mental analysis. Indeed, the range of the appreciation of beauty is invariably limited by the ability of the mind to make this analysis. If musical tones be made to follow one another too rapidly for the mind to distinguish the differences between them, the result is not rhythm or melody, but noise; or if a round disk with harmonious colours near its rim be made to revolve too rapidly for the mind to distinguish them, the whole produces only the effect of a mixed colour usually of a dingy and thoroughly non-beautiful white. A similar result is produced in poetry by metaphors or similes, the different effects of which are so complicated as to appear mixed, as well as by hues, outlines, or carvings of a similarly confused nature in pictures, statues, or buildings.

It may be said, however, and with reason, that this mental analysis is not necessary to the recognition of beauty alone, but of any appearance the parts of which one wishes to perceive clearly. Observe again, then, that whenever any outward form is perceived, and, as a result of being perceived, is termed beautiful, there is always in the mind a standard-form or a typical form, by which to judge of it. This standard-form, while clearly a result of the perception of the outward object, is nevertheless different from the outward object. It is a purely mental product conjured by imagination from the regions of recollection, association, and suggestion. In other words, it is a complex result of many mental experiences. "We may remark," says Immanuel Kant, in his "Kritik der Urtheilskraft," as translated by J. H. Bernard, pt. i., d. i., section 17, p. 87, "that the imagination can not only recall, on occasion, the signs for concepts long past, but

can also reproduce the image of the figure of the object out of an unspeakable number of objects of different kinds, or even of the same kind. . . . Every one has seen a thousand full-grown men. Now, if you wish to judge of their normal size, estimating it by means of comparison, the imagination, as I think, allows a great number of images (perhaps the whole thousand) to fall on one another. . . . And this is the stature of a beautiful man." In other words, according to Kant, the imagination acts in this matter in precise analogy to the method, discovered since his time, of the composite photograph.

The general principle brought out in this quotation is that, in connection with almost every phase of beauty recognised merely by the eye or ear, there is another phase recognised by the mind. Certain facts with which we are familiar in all the arts will illustrate this; and first in music. Notwithstanding the extreme difficulty of separating any musical effects whatever from such as appeal merely to the outward senses, those accustomed to analyse when listening to music will become conscious of a degree of æsthetic enjoyment not due to that which is being heard, but to certain concrete effects of that which has been heard before, and is now awakened in the mind by way of recollection, association, or suggestion. Even in cases in which nothing is thus recalled, the æsthetic pleasure is often enhanced by a wholly mental recognition of a balancing of phrase with phrase, and of movement with movement, such as we find in the blendings of melodies and their variations; or of two or more themes or tunes as in the overture of Wagner's "Tannhäuser," or in the "Star Spangled Banner," accompanied by "Yankee Doodle."

But this combination of mental effects with those of form can be recognised more clearly in connection with poetry. In this art, besides the beauty which is due to phraseology, as manifested in the choice and sequence of words, and in various developments of assonance, alliteration, rhythm, and rhyme, everybody acknowledges that there is also a beauty dependent upon the thought, the proof of which is that this beauty is frequently as great in prose as in poetry. But from what does this beauty spring? Clearly and unmistakably from a combination of the effects of recollection, association, and suggestion, assuming concrete form in the imagination; in other words, from the harmonious effects of many different forms, some coming from without and some from within the mind, some perceptible to sight, or recalled by memory as once perceptible to sight, and some, according to the laws of the mind, merely conjured by fancy. As a rule, too, the wider apart the spheres are from which these effects are derived, introducing that which is unexpected and surprising, the more striking is the beauty resulting from their combination, as where those that are extremely material are united to those that are extremely mental, *e. g.*,

> Still as a slave before his lord,
> The ocean hath no blast;
> His great bright eye most silently
> Up to the moon is cast.
>
> *The Ancient Mariner: Coleridge.*

A similar fact is true in the arts of sight. We sometimes find, as in the pictures of early Christian art, a degree of beauty which cannot be attributed to any fulfilment of the laws of line or of colour, such as meet the physiological requirements of the eye. Yet often these

pictures are acknowledged to possess great charm, owing to what is termed, notwithstanding the implication of some that it does not exist, beauty of expression. What is meant by this? Careful analysis will show that it means that the pictures give evidence of a blending of separate and very widely different effects, only a few of which are attributable to form as form. The rest are attributable to traits of character, which certain of the depicted faces and figures are supposed to manifest. But is not every one of these traits of character conjured by the imagination of the spectator and assigned to the forms only so far as they have effects upon the recollection of some like form, or upon one's association with it, or as they in some other way suggest a significance which can have its origin nowhere else than in his mind?

Possibly the reader may find himself desiring, just here, a further explanation of the method through which, in connection with an appeal to the senses, harmony of effects can be produced within the mind. What is meant by harmony of mental effects? It is not difficult to answer this question. In music or in poetry, it is produced when one, in composing a march, a waltz, a comic opera, or a tragic opera, or in writing an elegy, a love song, or an epic, selects in each case an appropriate form of movement or phraseology of rhythm or verse. The following lines not only enjoin but exemplify this method:

> Soft is the strain when Zephyr gently blows,
> And the smooth stream in smoother numbers flows;
> But when loud surges lash the sounding shore,
> The hoarse rough verse should like the torrent roar.
>
> *Essay on Criticism: Pope.*

In the arts of sight the same likeness between effects upon the eye and upon the mind is manifested when, as

in some landscapes, every cloud, wave, leaf, limb, or shred of clothing on human forms augments the suggestions naturally associated with the indications of the pervading fury of a tempest; or when, for instance, Oriental scenery and Moorish architecture, Italian scenery and Renaissance, Northern French and Gothic, are made to go together, as also the costumes or attitudes of certain figures, and the appearances of certain places or periods.

The theory that the highest beauty can exist aside from expression, or irrespective of expression, or of the quality of that expression, which seems to be held by many, especially by certain painters and literary men of the present, is not founded upon any accurate or comprehensive consideration of the subject. Take a scene of debauchery—a mingling of vice and nakedness—could any amount of faultless music or physique make this seem to a pure mind other than disgusting and revolting? And could the effects of beauty be fully experienced, or consciously experienced at all, in connection with either feeling? Certainly they could not, and why not? Because the effects which act together harmoniously, so far as concerns their influence upon the ear or eye, are accompanied by other effects produced through the agency of the imagination calling up forms from the realms of recollection, association, and suggestion; and with these latter effects the effects from without are discordant. The essential element of beauty is harmony resulting from complexity of effects, and the greater the number of the effects upon the mind that can be added to effects upon the senses, the greater, as a rule, is the amount of the beauty. A single note is beautiful, as has been said, because compounded of two or three different tones that harmonise; but it is usually more beautiful when heard in connection with a

melody or chord or series of chords that multiply the complexity of the harmony many scores of times. And it is still more beautiful when, in addition to this, it resembles, so as clearly to represent, some natural or conventional method of expression, and therefore some effect of emotion, and in connection with this a combination of the effects of many different emotions. Without the impressions of joy, admiration, surprise, or wonder, which are conveyed to the mind, it would often be impossible for tones—having, sometimes, the qualities of noise more than of music—to exert upon thought and emotion the thrilling and inspiring effects to which we refer when we term them beautiful. So with lines and colours, and with whole pictures; they are all made more beautiful, the more their harmony results from effects of apparent complexity in the form, and more beautiful still, the more this harmony results also from the mental effects of images recalled in memory or conjured by imagination. This increase of beauty continues up to the point where confusion begins, a statement which is true even of the blending of effects from different arts, as where to those of melody are added those first of harmony, then of poetry, then of acting, then of dancing, then of painting, then of sculpture, then of architecture, till, finally, we have all the components of a Wagnerian opera. In all such cases, up to the point where confusion begins—but it must be confessed that with some, perhaps with most people, it begins long before the list is completed—there is an apprehensible increase of the distinctly æsthetic influence.

As a result of the foregoing discussion, we may say that beauty is a characteristic of any complex form of varied elements producing apprehensible unity (*i. e.*, harmony or likeness) of effects upon the motive organs

of sensation in the ear or eye, or upon the emotive sources of imagination in the mind; or upon both the one and the other.

Of course, this definition is a broad one, and, being so, leaves much to be explained; but so does any definition, the only difference between a good one and a bad one being that the former clearly indicates exactly what it is that needs explaining. What needs explaining in this one is the particular methods through which likeness in effects can be produced in the senses, and in the mind, and in both. These methods will be found explained, to an extent never before attempted, in the author's "The Genesis of Art-Form," the general conclusions of which book are briefly summarised in Chapters XIV. and XV. of the present volume.

The definition, as has been said, is broad; but if it were not so, it might not apply to every phase of the subject. As it is, it interprets equally all beauty, whether manifested in nature or in art. How important this fact is, may be inferred from this remark made by J. S. Kedney in his "Critical Exposition of Hegel's Æsthetics": "Both Kant and Hegel, when they think of the beautiful, have in mind the productions of art, and only reluctantly allow place to the beautiful in nature, as though art almost monopolised the beautiful, and in it alone beauty, the highest and purest, was to be found."

The definition, moreover, applies equally well to beauty whether appealing, in time or in space, to the ear or to the eye, whether manifested in grace of movement or of outline, or whether in richness of tone or of colour. This breadth of applicability is essential to comprehensiveness; and it is largely the lack of the latter in many attempted definitions that explains their failure.

Again, the definition is so comprehensive that it may be said to include almost all the characteristics that any large number of writers upon the subject have considered essential to beauty. Not only do the general conclusions of the definition accord with the conceptions of that vast majority who attribute beauty to the effects of *harmony*,[1] or of *unity in variety*, or, as elsewise expressed, *the one in the manifold*,[2] but the recognition of the importance of the effects of form in connection with effects of thought and feeling accords with the conceptions of those who attribute beauty to the results either of *fitness*, *utility*, or

[1] The opinion, among others, of Pythagoras, Kepler in his "Harmonices Mundi," Leibnitz in his "Principes de la Nature," Kant in his "Kritik der Urtheilskraft," K. J. F. Schnaase in his "Geschichte der bildenden Künste," J. van Vloten in his "Nederlandsche Aesthetik," Lord Shaftesbury in his "Miscellaneous Reflections," Henry Fuseli in the "Lectures of the Royal Academicians," D. R. Hay in his "Science of Beauty as Developed in Nature and Applied in Art," J. Jungmann in his "Aesthetik," C. W. Opzoomer in his "Het Wezen der Kennis," James Sully in his "Sensation and Intuition."

[2] Plato, Aristotle, Vitruvius, and Augustine, J. P. de Crousaz in his "Traité du Beau," Francis Hutcheson in his "Inquiry into the Original of Our Ideas of Beauty and Virtue," William Hogarth in his "Analysis of Beauty," Alexander Gerard in his "Essay on Taste," William Shenstone in his "Essay on Taste," Abraham Tucker in his "Light of Nature Pursued," J. G. Sulzer in his "Allgemeine Theorie der Schönen Künste," F. von Schlegel in his "Aesthetik," H. van Alphen in his "Theorie van Schoone Kunsten en Wetenschappen," A. C. Quatremère de Quincy in his "De l'Universalité du Beau et de la Manière de l'Entendre," Victor Cousin in his "Du Vrai, du Bien, et du Beau," G. H. de Coster in his "Éléments de l'Esthétique Générale," the Abbé P. Vallet in his "L'Idée du Beau," Moritz Carrière in his "Aesthetik," K. C. F. Krause in his "System der Aesthetik," S. T. Coleridge in his "Biographia Literaria," J. G. MacVicar in his essay "On the Beautiful, the Picturesque, and the Sublime," W. B. Scott in his "Half-Hour Lectures on the History and Practice of the Fine and Ornamental Arts," Sidney Dobell in his "Thoughts on Art, Philosophy, and Religion."

adaptability,[1] or of *truth*,[2] or of *perfection*[3]; the recognition of the importance of effects in thought and feeling, in connection with effects of form, accords with the conceptions of those who attribute beauty to the expression of either *ideas*,[4] *associations*,[5] vital or spiritual *force* or *life*,[6] *goodness*,[7] *love* (*sympathy*),[8] or *personality*[9]; and the recognition of the importance of a combination of all these effects accords with the conceptions of those who

[1] Alexander Gerard in his "Essay on Taste," Lord Kames in his "Elements of Criticism," James Beattie in his "Dissertations," etc., Sir William Hamilton in his "Lectures on Metaphysics," James Fergusson in his "History of Architecture," A. W. Holmes-Forbes in his "Science of Beauty."

[2] F. von Schlegel in his "Aesthetik," Nicolas Boileau-Despréaux in his "L'Art Poétique," Joseph Torrey in his "Theory of Fine Art."

[3] Baumgarten in his "Aesthetica," Friedrich Meier in his "Anfangsgründe der Schönen Wissenschaften," J. G. Sulzer in his "Allgemeine Theorie der Schönen Künste."

[4] Rodolphe Topffer in his "Réflexions et Menus-Propos d'un Peintre Genevois—ou Essai sur le Beau dans les Arts," John Bascom in his "Æsthetics, or Science of Beauty."

[5] Archibald Alison in his "Essay on the Nature and Principles of Taste," Francis Jeffrey in an "Essay on Beauty," Thomas Brown in his "Lectures on the Philosophy of the Human Mind," Thomas Purdie in his "Form and Sound."

[6] Hegel in his "Aesthetik," J. M. Guyau in his "Les Problèmes de l'Esthétique Contemporaine," H. Quilter in his "Sententiæ Artis," J. van Vloten in his "Nederlandsche Aesthetik," Vincenzo Gioberti in his "Trattato del Bello," John Bascom in his "Æsthetics, or Science of Beauty."

[7] John Ruskin in his "Modern Painters," G. T. Ladd in his "Introduction to Philosophy."

[8] Erasmus Darwin in his "Zoonomia, or the Laws of Organic Life," Charles Darwin, in his "Descent of Man," John Todhunter in a lecture on the "Theory of the Beautiful."

[9] Theodore Jouffroy in his "Cours d'Esthétique," Hegel in his "Aesthetik," F. T. Vischer in his "Aesthetik," Eugène Véron in his "L'Esthétique."

attribute beauty to that which is either *symbolic*,[1] or, by *shine*[2] or *splendour*,[3] *transcends* or *transfigures* the ordinary.[4] Finally, the general conclusions reached may be made to accord with the most modern theories of physiological psychology,[5] as well as with the theories of either of the two great schools of idealism or materialism, with one or the other, or both, of which all possible theories may be classed. If the idealist tell us that all art springs from the embodiment of an ideal existing as an absolute spiritual essence in natural forms, which, wherever it is present, is intuitively recognised by the mind, we can accept his statement, provided he include in his conception of the ideal existing in the forms their physical effects upon the artist's physical nature, which he embodies as physical influences in the art that he produces. And if the materialist tell us that all art springs from the

[1] U. W. F. Solger in his "Vorlesungen über Aesthetik," T. Carlyle in his "Sartor Resartus."

[2] J. J. Winckelmann in his "Geschichte der Kunst des Alterthums," E. von Hartmann in his "Aesthetik."

[3] Abbé P. Vallet in his "L'Idée du Beau dans la Philosophie de Saint Thomas d'Aquin."

[4] Theories of Plotinus, Proclus, and St. Augustine, "La Vite di Pittori, Scultori, et Architetti moderni" of J. P. Bellori, "Alciphron, or the Minute Philosopher" of Bishop George Berkeley, "Du Beau dans la Nature, l'Art et la Poésie" of Adolphe Pictet, "Journal Intime" of H. F. Amiel, "Discours" of A. C. Quatremère de Quincy, "Proclus" and "Du Vrai, du Bien, et du Beau" of Victor Cousin, "Cours d'Esthétique" of Theodore Jouffroy, "La Science du Beau" of Charles Lévêque, "Lettera tura e Arti Belle" of A. Rosmini-Serbati, "De Socratische School" of P. W. van Hensde, "Essays on the Fine Arts" of S. T. Coleridge, "The Beautiful in Nature, Art, and Life" of A. J. Symington, the "Discourses on Beauty" of J. S. Blackie.

[5] See Appendix to this volume, page 387. Consult, also, the classification of the various theories of beauty in the author's "Art in Theory," pp. 106–184.

imitation, direct or indirect, of the forms of nature, we can accept his statement, provided he include in his conception of the forms of nature their psychic effects upon the artist's psychic nature, which he embodies as psychic influences in the art that he produces.

Before closing this chapter, mention, perhaps, should be made of *taste*, a term in common use, indicative of that within the mind enabling one to recognise an artistic effect, and to judge in some way of its quality. The term originated in an adaptation to a feeling in the mind of that which can be actually experienced in only one of the senses, and this a lower sense. As originally used, too, taste indicated a passive state; but even when referring to the lower sense it may indicate an active. A cook whose taste is good can prepare a dish to the taste of others. In a similar way, in art, the word may indicate a man's appreciation and also his application of the laws of beauty. Again, when referring to the lower sense, men are said to have a *natural* and a *cultivated* taste; and the same is true with reference to their attitude toward beauty.

As applied to the whole range of artistic effects, the relation of taste to the æsthetic nature seems to be precisely that of conscience to the moral nature, and of judgment to the intellectual. Enlighten a man's soul, his conscience will prompt to better actions; increase his wisdom, his judgment will give better decisions. According to the same analogy, cultivate his æsthetic nature,—*i. e.*, improve the accuracy of his ear or eye, his knowledge of the different appearances of life, or of modes of each life,—and his taste will be cultivated and improved. He may never reach a position where he can know what is absolutely beautiful any more than what is

absolutely right or wise; but he may be constantly approaching nearer such a knowledge. Hence, as applied to art, the old adage, "De gustibus non est disputandum," is not, in every sense, true.

CHAPTER III.

ARTISTIC MENTAL ACTION, AS DISTINGUISHED FROM THAT IN RELIGION AND SCIENCE.

That which is Expressed in Art—The Play-Impulse as Described by Schiller, Spencer, Brown—Relation of the Art-Impulse to Excess of Life-Force and to Imitation—To Spiritual Force—To Inspiration—The Conscious and Subconscious Spheres of Mind ; Memory—Hypnotism —Trained Automatic Skill—Subconscious Mathematical, Logical, and Musical Proficiency—Religious Inspiration, Scientific Investigation, and Artistic Imagination—Differences between Religion and Art—Art Can Influence for Good Religious Thought and Life—Differences between Science and Art—The Main Work of Science Conducted in the Conscious Mental Region ; that of Art Equally in the Subconscious —Illustrations—The Man of Imagination and of None—Subconscious Mental and Imaginative Action is not Irrational, though it is Rapid and Emotional—Connection between Artistic Mental Action and Temperament—Artists are Men of Sentiment.

CERTAIN limitations of the sights and sounds that can be used in the arts of the highest rank—termed by the French *Les Beaux Arts*—were considered in the chapter just closed. Let us now consider certain limitations of the thoughts and emotions that can be expressed through such arts. A moment's thought will reveal to us that these thoughts and emotions when exercised, in accordance with what was said on page 6, for a useful and therefore, a non-æsthetic end are usually such as are fitted to meet some external emergency; whereas thoughts and emotions exercised for an æsthetic and,

therefore, a non-useful end are usually such as are not intentionally fitted to meet any external emergency, but, on the contrary, are under the predominating influence of some inward impulse of the mind. The products of the higher arts are of the nature of those owing their origin, in the sphere of thought, to dreaming rather than to planning; in the sphere of feeling, to spontaneity rather than to responsiveness; in the sphere of action, to play rather than to work.

In accordance with this latter conception, the poet Frederick von Schiller, in his "Briefe über die aesthetische Erziehung des Menschen," attributes all æsthetic results to what he terms the play-impulse. Developing this theory, Herbert Spencer, in his "Principles of Psychology," says that "as we ascend to animals of high types, . . . we begin to find that time and strength are not wholly absorbed in providing for immediate needs. A cat with claws and appended muscles adjusted to daily action in catching prey, but now leading a life that is but in a small degree predatory, has a craving to exercise these parts. . . . This useless activity of unused organs, which in these cases hardly rises to what we call play, passes into play ordinarily so called, when there is a more manifest union of feeling with the action. . . . Dogs and other predatory creatures show us unmistakably that their play consists of mimic chase and mimic fighting. The plays of children—nursing dolls, giving tea parties, and so on—are dramatisings of adult activities. The sports of boys, chasing one another, wrestling, making prisoners, obviously gratify in a partial way the predatory instincts. . . ." G. Baldwin Brown, in his work on "The Fine Arts," after quoting this passage, adds: "Man possesses an ideal self-determined life,

FIG. 4.—POLLICE VERSO, BY GÉRÔME.

See pages 89, 191, 218, 279, 284, 290, 291, 300, 302.

existing side by side with, but apart from, his life as conditioned by material needs. This life expresses itself in, and is nourished by, various forms of 'free and spontaneous expression and action,' which in the lower grades of being may be termed simply 'play,' but in the higher grades take the shape of that rational and significant play resulting in art."

This is much the same as to say that every animate creature is an embodiment of vitality, or *life-force*, as we may term it; and, as if to prevent a lack of it in him, it is usually given him in excess. For this reason, as in the case of the desires behind all the appetites, it always tends to overflow the channels of necessary activity. When it does this, one invariable characteristic of play, as is suggested by Mr. Spencer in the quotation just made, is *imitation*. The same is invariably a characteristic of the art-impulse. Not only is dramatising, as Mr. Spencer intimates, imitation, but so, in a sense, is poetising, being supposedly representative of what men are supposed to say, or think, or do. So, too, are reproductions of scenes in nature through drawing, colouring, or modelling; and the same may also be affirmed, in a sense that need not be explained here, of much that is reproduced in music and architecture. These facts explain why it is, and how it is, that art of the highest rank, while that which reproduces most extensively and accurately the appearances, and, as shown in the preceding chapter, the beauties of nature, is also the art which furnishes expression for thoughts and emotions that are most freely and spontaneously impelled from within. Those, therefore, who identify the art-impulse with the play-impulse are justified when they apply their tests either to the results of the two, or to their sources. It is

hardly necessary to point out, after what has been said, that the products which are human in the finest and most distinctive sense, do not result from an excess of *life-force* in general, but only of that particular phase of it which is expended distinctively upon modes of expressing thought or feeling. *Force*, moreover, is something which derives its importance, if not its quality, less from itself than from that in which or upon which it operates. We all recognise a difference in both importance and quality in what we term hand-power and electric power. According to a similar analogy, it is evident that the force which is expended upon the imitation of nature may be much more important and very different in quality when it is used in the expression of thought and feeling than when representing merely physical phases of activity as among the lower animals. When this is understood, one can understand how art, while traceable to that which, in one sphere, is a play-motive, and while produced with an aim irrespective of any consideration of material utility, nevertheless often springs from mental and spiritual activity of the most distinctive kind, and results in the greatest possible benefit to the race. A being with a mind and spirit perpetually evolving thought and feeling possesses that which, for its own sake alone, ought to be expressed. With this thought we come upon a philosophic, if not a scientific, warrant for that common opinion, so often held without reasoning and expressed without discrimination, that the products of art are to be ascribed to what is termed *inspiration*. When we have traced them to this overflow at the very springs of mental vitality, no one who thinks can fail to feel that, if human life anywhere can come into contact with the divine life, it must be here. There are reservoirs behind the springs

of the mountain-streams. Are there none behind those of thought? And if there be any, what are they?

The answer to this question necessitates our entering upon a very broad subject, of which the outlines only can be indicated here. Let us start by saying that there is a hidden, occult sphere of the mind, of the operations of which we are ordinarily unconscious, and of the results of which we know only so far as they influence another sphere of which we are ordinarily conscious. The most apparent facts revealing the existence of this unconscious, or, as it is often called, subconscious sphere of the mind, are afforded, perhaps, by memory. The mind is constantly recalling experiences of which it has been so thoroughly oblivious that they have been supposed to have been lost. But equally conclusive evidences of the same subconscious possibility may be furnished by other mental processes. When trains of thought are conducting to conclusions with the rapidity of lightning, what is the mind doing but making use of stores not only, but of methods that are not outside of it, but in it, and yet are hidden so deeply in it as to be beyond the reach of any conscious control? In normal mental action we are only partly aware of the extent and importance of these stores, and may be startled to hear it stated that, probably, nothing whatever that a man has ever seen, heard, touched, tasted, smelled, or, by the slightest practice, developed into the suggestion of a habit, is lost, but remains indelibly impressed upon the intellect and character. Nevertheless, such seems to be the case. Captain Frederick Marryat, author of "The Adventures of a Naval Officer," relates that at one time he jumped into the sea to save a sailor's life, and, on rising, found himself in the midst of blood, giving evidence of the presence of a shark. Be-

tween that moment and the moment, almost immediately following, when he was rescued, he re-experienced, according to his story,—and the same thing in effect has been reported by many others,—about everything that he had ever done or said or thought. Coleridge states, in his "Biographia Literaria," that in a German village near Göttingen a young woman, twenty-five years of age, who could neither read nor write, was seized with a fever. While in this state she kept constantly repeating Latin, Greek, and Hebrew. Her physician, being of a scientific turn, traced back her history. He found that she had once been a servant in the house of a Protestant pastor. This man had been in the habit, while walking up and down in a passage into which the kitchen opened, of reading in a loud voice Latin, Greek, and rabbinical Hebrew. Many of the very phrases which the physican had taken down in writing at her bedside were found in the rabbinical books in this man's library.

Results analogous to these — occasioned, as will be noticed, in the one case by fright and in the other by fever—may be produced by hypnotism. This may be described as a method of putting the conscious body and, through it, the conscious mind to sleep. When this has been done, the subconscious mind may be made to wake up, and to take charge of the body's organs of expression. But there is no proof that hypnotism does any more than furnish an opportunity, availing itself of which the subconscious mind can exercise its influence in a way normal to itself, yet not ordinarily observed because hidden behind the activities of the conscious mind. The germs of thought from which the conceptions of the hypnotic patient are developed are often very elementary in character. Subjects possessing no oratorical gifts, for

instance, are told to personate some famous public speaker, and at once they set out, and, with apparent ease, deliver addresses closely resembling, either in method or phraseology, some speech of this man which they have previously heard or read, though only in an extremely superficial and heedless way.

This subconscious mental action is not confined, however, to memory. Skill in any department is a result of practice continued until the mind has become enabled to superintend a large number of details without having any of them clearly in consciousness. Every musician, for instance, is aware that after repeating a composition, as on the piano, the execution may become so familiar that his fingers will play it automatically, as it were, while his thoughts are very intently fixed upon something else, possibly upon the general expression of the piece, possibly upon something having nothing to do with music in any form.

When the subconscious action of the mind takes place in connection with processes which a man has learned and mastered, we may always attribute it, as we do recollection, to previous conscious action. But there are cases in which previous conscious action has had nothing to do with the subconscious action. As illustrating what is meant, take first the cases of lightning calculators, as they are termed—many of them mere children, who have hardly mastered reading and writing, much less arithmetic. In a way apparently unknown to themselves, they are able to solve the most intricate mathematical problem almost as rapidly as it can be read to them. Zerah Coburn was but eight years old when exhibited before audiences of the foremost mathematicians of his time. Here, according to the English "Annual Regis-

ter" of 1812, are two of the questions asked him, and answered before the numbers could be written down: "What is the square root of 106,929?" "What is the cube root of 268,336,125?" So with questions that can be solved by logic. Those acquainted with the phenomena of the subconscious mind, as disclosed by hypnotic influences, believe themselves to have reasons for holding that all mental processes are developed in it with flawless precision. The results are like those coming from a perfectly constructed automatic machine. The germ, however, which is thus developed, is, as a rule, suggested from the outside, usually by the hypnotiser, and if the premise be false, the conclusions of the subconscious logic will be false. Still more remarkable, perhaps, are the results of the subconscious in music. Mozart was only three years old when he began to play in public concerts, and when only eight years old he had composed a symphony for a full orchestra. He was, however, the son of a musician, and his facility might be attributed to some extent to his surroundings or to heredity. But neither of these reasons can in any way account for the performances of others. For instance, in our own country, there was Blind Tom, as he was called. He was an exceptionally ignorant negro, yet he could remember and execute, apparently, anything that was played but once before him, and, sometimes, without a moment's preparation, he could add to this variations as successful as the average of those resulting from long hours of labour on the part of educated musicians.

Enough has been said to make clear what is meant by action which has its source in the subconscious as distinguished from the conscious mind. Nor will any

explanations be needed to cause us to associate with the subconscious source, mainly but not exclusively, those results of *inspiration* which, through the spirit, are supposed to influence us in *religion*, or to associate with the conscious source, mainly but not exclusively, those results of *investigation* concerning the material world which are supposed to influence us in *science*. When we consider art, we invariably associate it with the results of *imagination*. But imagination, in its primary, though not in its secondary processes, always necessitates two things,—first, a conception coming from the mind within; and, second, a form selected from the world without, through which to image the conception. The conception, so far as minds are not conscious of its having form, must be attributed to the subconscious; in fact, is it not often spoken of as an *inspiration?* The form selected must be attributed to the external world with which one becomes acquainted through *observation*. Art, therefore, seems to involve about equally subconscious *inspiration* as exemplified in works of genius, and conscious *investigation* or *observation* as exemplified in works of imitation. What is termed a religious thought cannot become artistic until *imagination* has presented it in a form which manifests both observation of external appearances, and also information with reference to them as accurate, in some regards, as are those of science. Nor can a scientific conception become artistic before *imagination* has haloed it about with suggestions as inspired, in some regards, as are those of religion.

To illustrate these differences more in detail, the essential matter in religion is that the material forms of expression shall always be subordinate to the promptings of the higher spiritual nature. When this is the case, a

man's mental attitude, as it appeals to his own mind or is expressed to others, is characterised by faith; and it often, by way of contrast, appears to be characterised by this the more, in the degree in which his methods of speech or of action are not subordinate but, on the contrary, antagonistic to outward, or to what we ordinarily term practical, requirements,—in the degree in which, for all that he can see or hear in the world about him, his course may lead to disparagement, persecution, and, in ages of martyrdom, to death. In art the conditions are different. It involves no necessary subordination of the conscious to the subconscious. There is always a co-operation between the two, in which sometimes the one seems the more prominent and sometimes the other, but in no case does the mind fail to be conscious of external and material surroundings, or to aim at conformity to these. It is the essential condition of art that it should manifest this conformity; that it should produce a dramatic imitation, a melody, a metaphor, a picture, a statue, a building, whatever it may be, which in some way emphasises the influence of these surroundings. To religion, emphasis placed on these would often prove fatal. Religious effects are seldom produced by what are recognised clearly to be copies of mere forms. A Christian man through his conduct, and a church through its services, may represent the Christian life, but the moment that the representative element in either is emphasised, the moment that it is brought to our attention that the man's actions, attitudes, or facial and vocal expressions are assumed for the purpose of representing, he suggests to us a Pharisee, if not a hypocrite. With art it is the opposite. Its object is to represent; and the actor upon the stage, or any imitator of real life as

delineated in the drama or the novel, or depicted in the picture or the statue, awakens our approval in the exact degree of the unmistakably representative character of his performance.

It would be a mistake to suppose, however, that art, because different from religion, is antagonistic to it. The truth is just the contrary. It can be said, almost without qualification, that in all times of extreme traditionalism and unenlightenment art has proved the only agency that, without offending ignorance and superstition, has been able to counterbalance their influence. It has done this by using the forms of nature, and contenting itself with the truth as represented in them. Guised in familiar aspects, appealing to the mind by way of suggestion which leaves the imagination free to surmise or to deduce whatever inference may appeal to it, the thoughts expressed in art do not, as a rule, repel even the most prejudiced, or excite their opposition. A man in Italy, in the thirteenth century, would have been sent to the stake if he had made a plain statement to the effect that a pope could be kept in hell, or a pagan admitted to paradise. Yet when Dante pictured both conditions in his great poem, how few questioned his orthodoxy! So with the themes of painting and of sculpture. What a rebuke to the bigotry and the cruelty of the Middle Ages were the countless products of the arts of those periods, pleading constantly to the eye against the savage customs of the times for the sweet but little-practised virtues of justice and charity! Within our own century, too, notwithstanding the traditions of society, the State and the Church, which have often exerted all their powers to uphold and perpetuate slavery, aristocracy, and sectarianism, recall how the modern novel chiefly, but assisted largely

by the modern picture, has not only changed the whole trend of the world's thought with reference to these systems, but has contributed, more, perhaps, than any other single cause, to the practical reorganization of them, in accordance with the dictates of enlightened intelligence. Notice, too, that this influence of art extends to the whole region covered by religion, whether pertaining to this world or to the next. In ages like our own, when men rely chiefly upon the guidance of the conscious mind, it is extremely difficult for them to be brought to realise that there is any trustworthy guidance attributable to the action of the subconscious mind. Art does not discuss this guidance, but presupposes it. Through the results of the subconscious mind coalescing with those of the conscious mind it everywhere surrounds the material with the halo of the spiritual, causing those who will not even acknowledge the existence of the latter, to enter upon a practical experience of it in ideas, and to accept, when appearing in the guise of imagination, what they would reject if presented in its own lineaments. So the artist, though not a seer, always has within him the possibility of being the seer's assistant.

Now let us notice the difference between science and art. Science has to do with *investigation* tending to *knowledge*, both which we associate almost entirely with the action of the conscious mind. Art has to do with *imagination* tending to *ideality*, both which necessitate more or less action of the subconscious mind. It must not be supposed, however, that science has absolutely no connection with these latter. "Students of science," says Herbert Spencer, "are liable to forget that information, however extensive it may become, can never satisfy inquiry. Positive knowledge does not and never can fill

the whole region of possible thought. At the uttermost limit of discovery, there arises, and must ever arise, the question: What lies beyond?" When this question is asked, no mind can even begin to answer it, save one that is able to carry forward subconsciously the same mental process which, up to this time, it has carried on consciously. How do we know this fact? From the results. According to an old story, which may or may not be true, a Newton sees an apple fall to the ground, and, by a subconscious, but, as indicated on page 47, a strictly logical process, a conception with reference to the law of gravitation emerges, which conception we refer to imagination or inspiration.

At the same time the most important part of the work of science must be done in the conscious region, otherwise the subconscious mind will not argue from correct premises nor reach correct results. Before exercising imagination, science must analyse, if possible, every part of every effect that it observes, and every condition in time or space that has preceded it. In art these processes are not necessary. The effect can be accepted as a whole, and just as it appears at the time of observation. "There are in all considerable objects," says Sir Joshua Reynolds, when discussing this subject in the eleventh of his "Discourses on the Art of Painting," "great characteristic distinctions which press strongly on the senses and therefore fix the imagination. These are by no means, as some persons think, an aggregate of all the small discriminating particulars; nor will such an accumulation of particulars ever express them." The reason why art makes and uses what might be termed these "snap judgments" is obvious. It is a development of the earliest effects of nature upon the mind, especially

upon the mind's methods of expression. In other words, art is a development of the earliest endeavour of men to give form to thought for which they have no form at their command. It is not at the command of the savage or of the child, simply because no form appropriate has come, as yet, within the very limited range of his experience or information. It is not always at the command of the cultivated man, because, often, all forms with which he is acquainted seem to be inadequate. Accordingly the uncultivated and the cultivated alike are impelled to originate expressions for themselves. In doing this, they are obliged to interpret nature in a certain way. They must think about that which they have observed, and before they have had time to examine it critically, through the exercise of their conscious powers, they must judge of it instinctively through the exercise of their unconscious promptings. This principle applies, not only to their use, for purposes of expression, of imaginative words and imitative drawings, but to their whole methods of conceiving of the material world. The boy hears of a sailor or of a general, and for the very reason that he has had no experience of the life led by either, he imagines it, and the man in the same condition surmises what might be the experience of a fairy or of a saint. As Shakespeare says:

> The poet's eye in a fine frenzy rolling
> Doth glance from heaven to earth, from earth to heaven,
> And, as imagination bodies forth
> The forms of things unknown, the poet's pen
> Turns them to shapes and gives to airy nothing
> A local habitation and a name.
>
> *A Midsummer Night's Dream*, *v.*, *1.*

Or, if Shakespeare belonged to an unscientific age, let

us see what a poet of our own age has to say on the same subject:

> Well might we be glad
> Lifted above the ground by airy fancies
> More bright than madness or the dreams of wine;
> And, though full oft the objects of our love
> Were false, and in their splendour overwrought,
> Yet was there surely then no vulgar power
> Working within us,—nothing less, in truth,
> Than that most noble attribute of man,
> Though yet untutored and inordinate,
> That wish for something loftier, more adorned,
> Than is the common aspect, daily garb,
> Of human life.
>
> *The Prelude, v.: Wordsworth.*

Between the man who has the conception of the things surrounding him that is represented in this passage and the man who has not, there is the widest possible difference. The former, to quote from Wordsworth again, is characterised by

> ——a mind
> That feeds upon infinity, that broods
> Over the dark abyss, intent to hear
> Its voices issuing forth to silent light
> In one continuous stream; a mind sustained
> By recognitions of transcendent power,
> In sense conducting to ideal form.
>
> *The Prelude, xiv.: Wordsworth.*

The latter—the man of no imagination—passes through life in the condition described in "Peter Bell":

> He travelled here, he travelled there;—
> But not the value of a hair
> Was heart or head the better.
>
> He roved among the vales and streams,
> In the green wood and hollow dell.

They were his dwellings night and day,
But Nature ne'er could find the way
Into the heart of Peter Bell.

In vain through every changeful year
Did Nature lead him as before:
A primrose by the river's brim
A yellow primrose was to him,
And it was nothing more.

Peter Bell: Wordsworth.

It must not be supposed, however, that the mind in following the lead of these instinctive promptings from the subconscious is invariably deluded. It is often guided aright. It is exercising with reference to apparent facts the same general method that science itself is obliged to exercise with reference to investigated facts. As intimated on page 47, the subconscious processes of mind which underlie the ideality of imagination are often, in the highest sense, logical and rational. Frequently, the difference between the artistic and scientific method might be said to be owing merely to the different degrees of rapidity with which the mind is moving. This fact will be evident upon recalling the condition usually accompanying the mind's imaginative and, therefore, partially subconscious actions. It will be found to be a condition of emotive excitement. Listen to the children as they watch a display of fireworks. With what facility they recognise resemblances! Roosters, churches, fans and fountains,—these are what they imagine to be in shapes suggesting nothing to their parents. Yet when some excitement strong enough to appeal to these latter has succeeded in moving them, they, too, will become unexpectedly imaginative. As for the intelligent artist, there is reason to suppose that imaginative results in his case,

also, are owing to mental action too rapid for him to be conscious of all its processes. This fact, indeed, is often very effectively represented in artistic products, especially in literature, the words of which are particularly fitted to reveal exactly what is taking place in the thoughts to which the words give expression. Recall the ellipses and consequent obscurity in which writers like Carlyle and Browning indulge. In almost every instance where obscurity of this kind is observable, some additional reflection would have enabled the writer to recall and to reveal the missing links of thought, and thus to give his expressions the effects of critical precision. In many cases we may criticise his not doing this. But had he done it in all cases, would the result have been as artistic as it is? Thus expressed, would it not have represented a conception in all of its details clearly present to the conscious mind? But art, as we have found, represents a conception of a part of which the mind is conscious and of a part of which, because due to subconscious influence, the mind is not conscious. Thus this effect of obscurity, so often recognised as being for some vague reason particularly artistic, is seen to be so because it accords exactly with the requirements of art.

Now, taking one step farther backward, let us find out, if we can, the conditions which, in the artist, occasion the emotion which in turn occasions a manifestation in expression of the results of subconscious mental action. What gives rise to this emotion? If it were experienced only now and then, it might be attributed to exceptional circumstances. The works of the lesser or occasional artists are produced amid excitement which at intervals avails in all to paralyse the logical powers and to stimulate the analogical. But when, as in the greater artists,

such phases of emotion are the rule and not the exception, then the experience must be attributed mainly to *temperament*. This is a word which, as will be noticed, does not refer merely to physique, but to a certain kind of mental action which naturally accompanies a blending of effects, some of which are physical and some mental, some of which are matters of nervous sensation, and some matters of thought. Lord Kames, in his "Elements of Criticism," says that "thought, as prompted by passion or feeling, is sentiment." According to Schiller, in one of his letters to Goethe, "it is a want of the poetic nature, not to say of the human mind generally, to bear around it as little as possible that is void, to appropriate to itself, through feeling, as much as is going on. . . . Always is the sentimental—in a good sense—an effect of the poetic endeavour."

A slight attempt to recall the foremost trait of expression distinguishing any man who has given himself to the study and production of art will verify by facts this conclusion of Schiller. Is it not true that artists and poets, and often even mere admirers of music, painting, sculpture, or poetry, are persons given above all things to sentiment? Can we not perceive this sometimes in their very gaits and gestures, in the involuntary waverings of their lips, in the unconscious bewilderment of their eyes? Does not the very sight of them often make us feel that they are men who have been exhilarated, if not intoxicated, by drinking in thoughts that brim above the commonplace; that they are men whose moods are loyal to an all-pervading sovereignty of soul? Can we not often detect, behind all that they do or say, the spiritual force of unseen ideality, the unselfishness of non-material purpose, the virtue of uncompelled industry, the enthusiasm

that revels amid dim twilights of inquiry and starry midnights of aspiration? How different is their mien from that of those who manifest none of their vaguer, softer qualities, but pride themselves upon the fact that they are sharp! And, verily, too often they are sharp, their very visages whittled to a point like snow-ploughs on a wintry track that always draw attention downward and cleave through paths that chill. The brightness of their eyes is that of diamonds that are used only to cut, the summons of their voices that of trumpets that are ever blowing of their own sufficiency. No radiance of a spiritual light that streams from inward visions, is haloed from the one. No call toward a sphere too subtle to be heralded by aught except "the still small voice" is echoed from the other. What is lacking in the methods of mental action of men like these, as every one who knows the highest possibilities of art can testify, is the kind of culture which leads to the conception within and the expression without of sentiment—not sentimentality, which is always selfish, as well as a caricature, and an effect not based upon facts; but vigorous manly sentiment, something rooted deep in common-sense but yet not common; rather its uncommon development when the material branch and leaf, grown upward, burst into that which sheds the fragrance of the spirit's flower.

CHAPTER IV.

ARTISTIC RESULTS AS DETERMINED BY TEMPERAMENT, TRAINING, PRACTICE, AND SKILL.

How the Artistic Differs from the Scientific Mind — Some Unfitted by Nature to become Artists—The Effect of Education in Training Ability to Use what has been Stored in the Mind—Ability to Use this Depends on the Physical Power of the Brain—This can be Developed by Practice—This Development can Extend to that which Involves the Possession of Genius—Training Affects the Quality of Subject-Matter as well as of Style—The Ability to Give Expression to Subconscious Inspiration which Characterises Genius is also Due to Skill Acquired by Practice—Subconscious Powers can be Cultivated through Training the Conscious, as in the Case of Memory—Of Critical Ability—The Degree of Work is Apt to Measure the Degree of Worth—Any Development in the Mind may Contribute to Artistic Development.

SUCH a conclusion as the one drawn at the end of the preceding chapter suggests that we have, probably, reached at last an ultimate fact beyond which analysis cannot go. It is the ground on which was based that old expression: "The poet is born and not made." Lest, however, we exaggerate the differences between men thus indicated, let us try to ascertain precisely what that temperament is which may be rightly termed artistic. From what has been said already, we must infer that, primarily, it is one that is quick in apprehending effects of nature, in making comparisons between these effects, and in drawing surmisals from them. All children, because their brains are active, are artistic in their tendencies.

The very essence of artistic imitation is mimicry; and what child is entirely destitute of this? When men arrive at maturity, the artistic mind, as distinguished from the scientific, continues to form theories before it reasons them out, and to imagine truth before it investigates. If one naturally of an artistic temperament ever does reach results that are scientific, this term "scientific" cannot be applied to the movement of his mind preparatory to these. Instead of advancing step by step toward his end, he first jumps to his conclusions, as Newton is said to have done when, from the falling of an apple, he surmised the law of gravitation; and then turns backward to discover and reveal what might have been the intervening steps. Notice, nevertheless, that this method of mental action is that which is most allied to the method which the world usually attributes to genius. The artist works almost exclusively in this way, so the world supposes that he must be a genius necessarily. The scientific man has very much to do besides surmising and inventing; so the world confines the title genius to the few scientific minds pre-eminent in doing these latter.

However, all men have emotion. All may be strongly moved, and, in such circumstances, the minds of all may be subject to subconscious action. But when we try to answer the question,—To what extent may one as compared with another be subject to this? we find the differences between men almost world-wide. We must conclude, therefore, that large numbers are by nature excluded from the sphere of action of the artist. They are too cautious, too much under the control of consciousness, or, as we say, self-consciousness, to give themselves up to the abandon of subconscious mental activity. They are like those whom Mozart had in mind when he said:

FIG. 5.—LEAVING FOR WORK.—J. F. MILLET.
See pages 89, 90, 95, 97, 190.

"If you think how you are to write, you will never write anything worth hearing. I write because I cannot help it." They are like orators—and, for that matter, sculptors and musicians—who never lose themselves in their subjects, and, therefore, never become effective. It might be almost said that faith in the results of that which is beyond the sphere of consciousness enables one to reach the æsthetic paradise no less than the heavenly.

At the same time, it is easy to emphasise unduly the natural differences between men. It is easy to suppose that one has no artistic ability, when in reality he has a great deal of it. Very often, though latently present, it has merely not been brought to the light. It is easy, therefore, to ignore the methods through which whatever artistic possibilities one may possess may be cultivated. These methods may be best understood, if we start with a conception of the influence upon mental action of education in general. From this conception the transition will be easy to that of the particular effect upon education produced by art-study. The word education is composed of the two Latin words, *e*, meaning *from* or *out of*, and *ducere*, meaning *to lead*. But why should *to educate* mean *to lead from* or *out of?* Is it possible to ask this question without having suggested what was said on page 44? It was there noticed that all that we consciously experience through the agency either of the physical senses or of psychological intellection passes into the mind's regions of subconsciousness. Here, though much appears to be lost, probably nothing actually is lost. That it always remains seems to be abundantly proved by the results of abnormal excitation, as in fright, fever, and hypnotism. If this be so, the problem of education has to do not with the methods of obtaining

information from without, so much as of bringing back to consciousness information already stored within. The mind that is best able to bring this back at the right times and places, is the best educated.

Now on what does the ability of the mind to do this depend? There is reason to suppose that it depends largely upon the quality and comparative strength of the physical brain through which one does his work. It is said that the brains of Daniel Webster and of Amos Lawrence, a successful merchant of Boston, both of whom died about the same time, were compared, and were found to be of very nearly the same size and weight, but the convolutions in the brain of Webster were found to be more numerous. That is to say, his brain was of finer physical fibre. That mental ability depends upon the physical strength of the brain may be shown in another way. Give a small child a message to deliver, and he will bring it up to consciousness with difficulty, hesitating between almost every word. "My mother—wishes—wishes—me—to—to"—etc. But the same child after a year or two, when older and stronger physically, will experience little of this difficulty, and, after attaining manhood, none whatever, even though the communication to be recalled be a thousand times more complex.

It is not, however, merely the passage of time and its influence upon growth that can strengthen our physical powers. The same effect may be produced by training, especially by that form of it which we give to ourselves through *practice*. We know this to be true as applied to our hands and voices. Why should it not be true as applied to our brains? But notice that if it be true as applied to these, and if all that was said in the last paragraph be also true, then *training* can do much more for

artistic development than some suppose. It can produce facility not only in outward expression, giving the singer, orator, or actor a flexible voice or a graceful body, or the musician, painter, or sculptor dexterity in the use of fingers, brush, or chisel. It can produce facility in the processes of inward preparation for expression, enabling the mind to draw at will from the subconscious resources that which is the subject-matter of artistic invention and inspiration.

It is true, of course, that no amount of practice can enable some to become artists, and that in exceptional cases or upon extraordinary occasions some may produce genuine works of art who have practised little; but, as a rule, practice is indispensable if one wish to attain the characteristics supposed to be possessed habitually by the great artists. We find this fact illustrated almost universally. Of course, there are a few exceptional cases like that of Mozart, mentioned on page 47. For him, notwithstanding the instruction that he received, practice does not seem to have been absolutely indispensable. And it was not so, say some, because he was a genius. But let us think a moment. Might he not have been a genius, and also have been obliged to cultivate his powers? In fact, in later life, did he not cultivate them? Again, was not Beethoven a genius? Yet when he was three years old he knew nothing, so far as we are aware, of music; and very little when he was eight. But after he had practised many hours a day for ten or fifteen years, he could do as well as Mozart could in early manhood; and not only so, but a few years later he could do better than Mozart ever could. Not a few to-day consider Beethoven the greater genius of the two.

What is true of music is true of every art. There was

Demosthenes. As most of us have heard, when he first ventured before an audience, his stammering articulation, interrupted respiration, ungraceful gestures, and ill-arranged periods brought upon him general ridicule. What was it necessary for him to do in order to speak artistically? To think, every time that he came before the public, of his articulation, respiration, gestures, and periods? Had he pursued this course, he never could have waxed eloquent, because he never could have entered into his theme with unconscious abandon. What he did, was to withdraw altogether from the public until, by a course of persistent practice, he had trained himself for his work. Nor must it be supposed that the results in his case, or in that of any other man practising similarly, were confined, or could be confined, to such as can be manifested merely in external manner or style. Many find the strongest indication of what they term the inspired genius of Henry Ward Beecher in his marvellous illustrative ability, in his imaginative facility in arguing from analogy. He himself, in his "Yale Lectures," said that not only did he practise elocution "incessantly for three years," but that, while in later life it was as easy for him to use illustrations as to breathe, he did not have this power to any such extent in his early manhood, but cultivated it.

The problem of expressional art is how to train the conscious agencies of expression so that they shall respond without interference to the promptings of subconscious agencies. The musician has always practically solved this problem when he is pouring his whole soul into his music, unconscious of anything but the emotional effect that he desires to produce upon the souls of his hearers. The sculptor and the painter have always

solved it when they are projecting into line or colour, unconscious of being hampered by any thought of technique, that image which keen observation of the outer world has impressed upon their conceptions. The poet has always solved it when he has lost himself in his theme, unconscious of anything except that to which Milton refers in "Paradise Lost," ix., when he says that it

> —dictates to me slumbering, or inspires
> Easy my unpremeditated verse.

But, now, this method, of which we remain unconscious, through which thoughts and emotions pass from the subconscious mind through the conscious mind, and out of it again into the details of form, is the result of what most men mean when they use the term artistic inspiration. Yet notice that it is often, too, even in cases of the most indisputable genius, a result, in part at least, of *skill* acquired by *practice*.

The truth seems to be that, although there is a wide separation between the conscious and the subconscious powers, the mind as a whole is one, and almost any method of cultivating one part of it involves cultivating other parts. What forms of mental action can seem more widely separated than those of memory and of imagination? Yet there is truth in what E. S. Dallas says in "The Gay Science," that "it is not so much to a trained invention as to a trained memory that the poet who seeks for variety must chiefly trust; and it will be found that all great poets, all great artists, all great inventors, are men of great memory—their unconscious memory being even greater than that of which they are conscious. And thus far, at least, we can see a deeper

wisdom in the doctrine of the Greeks that the Muses were all daughters of Mnemosyne."

Let it not be thought, then, that education, experience, and learning unfit one for those pursuits which are usually supposed to necessitate genius. Milton wrote little poetry until he had ended his argumentative and political work. Goethe and Schiller both profited much from the discriminating scientific criticism to which, as appears in their correspondence, they were accustomed to submit their productions; at all events, they achieved their greatest successes subsequent to it. And with criticism playing all about his horizon, like lightnings from every quarter of the heavens, who can calculate how much of the splendour of Shakespeare is attributable to this by-play among the circle of dramatists by whom he was surrounded? With new forms rising still like other Venuses above the miasmas of the old Campagna, who can estimate how much the excellence of the Italian artists has been owing to the opportunities afforded in historic Rome for critical study?

The results of art have not disproved that universal principle according to which the degree of labour, mediate or immediate, generally measures the degree of worth. A bountiful exuberance of imagination usually accompanies abounding information. The analogies of the poet are usually most natural to the mind that has made the most scrupulous study of nature. Truth, comprehensiveness, and greatness, manifested in artistic products, are usually crystallisations of the accuracy, breadth, and largeness of the formative thought occasioning them.

CHAPTER V.

ARTISTIC FORM AND SIGNIFICANCE.

Review of the Thought in Preceding Chapters—Reproduction of Beauty Necessitating Attention to both Form and Significance—Meaning of the Term "Form" in Art—Of the Term "Significance"—The Necessity for Giving Due Consideration to both—Regard for Form and Disregard of Significance in Painting—In Sculpture, Architecture, Music, and Poetry—How Far the Artist must Consciously Regard Claims of Significance—Regard for Significance and Disregard of Form in Poetry and Painting—In Architecture—In Music—Regard for Form and for Significance Need not be Antagonistic—Reason for Applying to the Higher Arts the Term "Representative."

THE opening chapter of this book undertook to show that art which is such in the finest and most distinctive sense has to deal with the sights and sounds of nature, with human thoughts and emotions, and with products external to the artist. In Chapters II., III., and IV., certain limitations were placed upon each of these conditions. This art was said to be confined to such sights and sounds as are beautiful, to such thoughts and emotions as are largely due to the subconscious action of the mind, when influenced by emotion and stimulating imagination, and to such products external to the artist as embody the other two conditions instinctively, or as a result of skill, acquired by practice. In this chapter, an endeavour will be made to limit the province of these higher arts still further, and in such a way as to indicate a single principle applicable to all of them in all of these

relations, whether considered as rearrangements of nature, as expressions of thoughts and emotions, or as products external to the artist.

We will begin with a suggestion derived from the fact that high art deals with sights and sounds that are beautiful. Beauty, as we have found, depends upon effects upon both the senses and the mind. But if this be so, sights or sounds used in art must produce effects upon both. They can evidently do this so far only as, together with effects peculiar to appearances, they convey also certain effects peculiar to a significance underlying the appearances. This introduces us to the controversy in art as to the relative or exclusive importance of *form* and of *significance*.

The term *form*, derived from the Latin word *forma*, meaning an *appearance*, refers, primarily, to anything that can be perceived by the senses, and, in the higher arts, for reasons given on page 8, by one of two senses, —that of hearing or of seeing. But, besides this, the term has a secondary and metaphorical meaning; it refers to any conception the whole and the parts of which appeal to the imagination—*i. e.*, the imagining power of the mind—in a clearly articulated, distinctly outlined, or graphic way, so that one may liken the conception to a thing that the senses can perceive. This is the use of the word which justifies one in speaking of the *form* of an oration or a drama, or of a storm-scene or a battle-scene, which latter he may have only in mind without any intention of ever actually putting it into the form of a picture.

The term *significance* refers to that which is supposed to be indicated to the mind through the form. Sometimes the form indicates this on account of what it is in

itself, as when the picture of a man looking intently at an object makes us think that he is studying it. But sometimes the form in itself has nothing to do with the significance, which it only suggests by way of association. For instance, in certain circumstances, by hanging out a national flag, or by wearing the national colours, we may manifest our patriotism. The flags and colours are the *forms* through which, because men can see them, we indicate the patriotism which men cannot see. The flags and colours are the signals, the patriotism is the thing signified, or the *significance*. This illustration will indicate what is meant in art by *form* and by the *significance* expressed through the form. Very many forms which an artist can use inevitably suggest—on account of what they are in themselves, or of their associations—one conception and no other. Therefore, in reproducing them, the artist must treat them not as mere forms, but as forms which, by way of nature or of ordinary use, have a definite meaning. If, for instance, we ask a sculptor who has tried to represent a certain character, why a hand has been moulded so as to produce a gesture with the palm up instead of down, he cannot give a satisfactory answer by saying that he has moulded it thus for the sake merely of the *form*, in case he mean to use this word as indicating an *appearance*. One gesture, if well made, may *appear* as well as another. The difference between the two is wholly a difference of meaning, of *significance*.

It might be supposed that the importance of both form and significance as thus explained, as well as the importance of the artist's considering both, when engaged in his work, would be conceded without argument. But such is not the case. Because art must have, as all admit, a

FIG. 6.—THE GIRLHOOD OF THE VIRGIN MARY.—ROSSETTI.

See page 90.

form reproducing in some way an appearance of nature, there are those who affirm that regard for forms alone is sufficient; that if attention be concentrated upon them, the significance may, so to speak, take care of itself. Others again, because art must be, as all admit, significant of thoughts and feelings, affirm that regard for what is to be expressed is sufficient; that if attention be concentrated upon this, the form may, so to speak, take care of itself.

The first of these views was well illustrated by a story which the author heard recently well applauded at an artists' public dinner. It was said that some one, in a French gallery, noticed two painters approach a picture, and heard them discuss the colouring of some fowls. After about five minutes they turned away; and, just as they were doing so, one of them said to the other: "By the way, what was that picture about? Did you notice?" "No," said the other. Now, while this story illustrates the kind of interest which not only the painter, but the artist in any art—music, poetry, sculpture, or architecture,—necessarily comes to have in the technique of his specialty, it does not illustrate all the interest which one should have who has a true conception of what art can do for people in general. It does not illustrate the sort of interest that Angelo or Raphael had in their productions. On a Sunday, one could sit for an hour before the Sistine Madonna of the latter, and feel more benefited than in most of the churches. Nor in this, nor in many another picture would the chief benefit be traceable to that which had to do with the form, *i. e.*, the appearance aside from the significance or the thoughts or feelings expressed through the appearance. "He is what I call a vulgar painter," said a critic, some time ago, when

speaking of an artist. "Are you getting ethical in your tastes?" was asked. "Not that," he answered, "but don't you remember that picture of a little girl by Sargent in the National Academy Exhibition last year? You could n't glance at it, in the most superficial way, without recognising at once that it was a child of high-toned, probably intellectual, spiritually-minded, aristocratic parentage and surroundings. Now, if the man of whom I was speaking had painted that child, he could not have kept from making her look like a coarse-haired, hide-skinned peasant." It is easy to perceive that, if this criticism were justifiable, the fault indicated would be largely owing to the failure of the artist to recognise the thoughts and feelings that men naturally associate with certain appearances of line and colour. It would be largely owing to the fact that he had never learned that the round, ruddy form of the vital temperament that blossoms amid the breeze and sunshine of the open field has a very different *significance* from the more complex and delicate curves and colours that appear where the nervous temperament is ripened behind the sheltering window-panes of the study. An artist believing in significance merely enough to recognise the necessity of representing it in some way could, with a very few thrusts of his knife, to say nothing of his brush, at one and the same time relieve the inflammation of chapped cheeks, and inject into the veins some of the blue blood of aristocracy.

A similar principle applies to sculpture and architecture. The impression conveyed by a statue is produced by its significance for the mind—*i. e.*, by the subject represented in its pose, gestures, and facial expression—fully as much as by the mathematics of its proportions or

by the imitative skill manifested in its chiselling. Similarly in the impression conveyed by a building, the embodiment of the mental conception in the general arrangements causing them to be representative of the plan of the whole, or to be illustrative of special contrivances of construction in the parts, is fully as important as the character of the masonry or the colouring or the harmony of the outlines. So with music and poetry. When we are discussing the influence upon thought or emotion of consecutive or conflicting themes or scenes in an opera of Wagner, or a drama of Shakespeare, we are talking about that which, though partly conditioned upon laws of musical or poetic form, as we ordinarily use the term, nevertheless, transcends them. In mere jingle the principles of rhythm and harmony can be fulfilled almost as perfectly as in the most inspired and sublime composition. This fact seems to be self-evident. Yet, in his "Degeneracy," Max Nordau quotes Théophile Gautier as saying: "For the poet words have, in themselves and outside the sense they express, a beauty and a value of their own. Nothing is less ideal than a poet"; also the following from Charles Baudelaire: "If a poet have pursued a moral aim, it is not impudent to wager that his work will be bad. Poetry has not truth for its object, it has only itself"; and this from Gustave Flaubert: "A beautiful verse meaning nothing is superior to a verse less beautiful meaning something." "From time to time," says Oscar Wilde, "the world cries out against some charming, artistic poet, because, to use its hackneyed and silly phrase, he has 'nothing to say.' It is just because he has no new message that he can do beautiful work." Think of the literary prospects of a country or of the world; of the possibility of its receiving any

inspiring impulses from its poets at a period when new authors, writing with the acknowledged motives of Dante, Milton, or Wordsworth, would, for this and for no other reason, fail to commend themselves to the leaders of literary opinion!

It must not be inferred from what has been said of the importance of significance, that the author intends to assert that every artist, when composing, must consciously think of significance as well as of form. Many a child unconsciously gestures in a form exactly indicative of his meaning. But often, owing to acquired inflexibility or unnaturalness, the same child, when grown, unconsciously gestures in a form not indicative of his meaning. What then? If he wish to be an actor, he must study the art of gesture, and for a time, at least, must produce the right gestures consciously. And besides this, whether he produce them consciously or unconsciously, in the degree in which he is an artist in the best sense, he will know what form he is using, and why he is using it. The same principle applies in all the arts. The simple truth is that the human mind is incapable of taking in any form without being informed of something by it; and it is the business of intelligent, not to say honest, art to see to it that the information conveyed is not false, that the thing made corresponds to the thing meant.

At the same time, it is equally important for the artist to avoid supposing that to pay attention to significance, and to this alone, is all that is essential. Goethe once said that his poetry had been a continual confession. Suppose that it had been merely a confession. Would this alone have made him the greatest poet of his time? To become such, did he not need, besides thinking of

the significance of that which he was to say, to think also of the form in which he was to say it? And was not the significance one thing, and the form—the versification, or the unity of the plot—another thing? And might he not have paid attention to the one, and not to the other? Most certainly he might. But if he had he would never have ranked where he does—with Dante and Shakespeare. So in painting and sculpture. The figures of Benjamin West and Julius Schnorr are arranged more effectively than many a most spectacularly significant climax in a drama; those of Balthasar Denner and Florent Willems manifest the most scrupulous regard for the requirements of line and colour. Yet because exclusive attention to either significance or form led all of them to neglect one of the two, they never can rank with artists of which this was not true—Raphael, Titian, and Rubens.

The same is true with reference to architecture. Twenty years ago large numbers of people were talking about *sincerity* in this art. As applied to building a house, this meant that every respective closet or staircase should be indicated on the exterior by a significantly constructed window, or blank space, or protuberance,—a thoroughly sound principle so far as it was applicable. But with the narrowness and the lack, in a distinctive sense, of *comprehension* characterising the artistic notions of our times, the principle was applied to everything—to every exterior effect, for instance, without any regard to any requirements of proportion or harmony. The result was those developments of the "Queen Anne" style, which even the unbalanced conceptions of contemporary criticism had sense enough to nickname "Bloody Mary" and "Crazy Jane." Probably, however, even these were an advance upon the method pursued in a construction

of which I know, in which the exterior was completed before the builders had decided upon the rooms or halls to be placed in the interior.

And so with music. The difference between a melody of Offenbach and the least successful *recitative*-work of Wagner is the difference between treating musical form as if it were wholly a matter of form, and as if it were wholly a matter of significance. The difference between both and the best music of Wagner, and of Mozart, Beethoven, and Sullivan, too, is that in the latter the importance of both form and significance has been duly recognised.

It might be inferred from what has been said that the requirements of form and of significance are essentially different. Indeed, many artists and critics, apparently, imagine that, in order to do justice to one of the two, they must subordinate the other or neglect it altogether. This supposition has led to two schools of art, the one grounding it, primarily, upon imitation, the other upon the communication of thought and emotion. But why should there be these two schools? A man usually imitates a form because he has had some thought or feeling in connection with its appearance,—in other words, because it has suggested something to him, because it has had for him some significance. The very existence of art-form, therefore, involves the existence of significance. Again, a man communicates thought and emotion through a form because these, in the condition in which they exist in the mind, cannot be heard or seen by others. They must be expressed audibly or visibly; that is to say, in a form. The existence of significance, therefore, if one would make it known, involves the use of a form.

Actuated by these suggestions, as well as by a knowledge of the influence often exerted upon conception by a single term sufficiently comprehensive to include all that the conception contains, the author, when searching, at the beginning of his studies upon art, for a word expressive of that which is the general result of art-production, whether considered as repeating the effects of things seen or heard in the external world, or as giving utterance to thoughts or feelings, came upon the word *represent*. It is not a new word in the history of art; but it seems never to have been used in a manner sufficiently comprehensive. Painting, for instance, has been termed representative and music presentative. In this book, it will be shown that the latter, too, is representative. When examined carefully, it will be found that this word *represent*, without any distortions of its ordinary meanings, can express, in all cases, the exact results of any form of imaginative art. When reproducing the appearances or occurrences of nature, imagination represents them in external form. But it also represents the thoughts and emotions which the mind has come to associate with the form. Nor, as will be shown presently, is there any artistic quality which cannot be sufficiently tested by applying to any of the characteristics of any art-work—whether they pertain to form or to significance—the question, What does it represent?

CHAPTER VI.

ART AS REPRESENTATIVE RATHER THAN IMITATIVE OF NATURAL APPEARANCES.

Representation Contrasted with Imitation — Co-ordinated with Requirements of Imagination—Of Sympathy—Representation *versus* Imitation in Music—Representation in Music of Intonations of Speech—Of Natural Humming and of Surrounding Sounds—Representations of Nature in the Sounds and Figures of Poetry—In its General Themes —Representations of Nature in Painting and Sculpture—While Sometimes Imitative, These Are Always Representative — Shown in the Results of the Study of Values—Of Light and Shade—Of Shape and Texture—Of Distance, and the Classic and Impressionist Line—Of Aërial Perspective—Of Lineal Perspective—Of Life and Movement—Explaining Occasional Lack of Accuracy—Same Principles Applied to Sculpture—Representation rather than Imitation of Primitive Architecture as in Huts, Tents, etc.—Architectural Perspective as Applied by the Greeks—Explaining Differences in Measurements of Similar Features in the Same Building—Differences in Measurements of Corresponding Features in Different Buildings—Representation not Imitation the Artist's Aim in Reproducing Forms in Architecture.

THE truth of the statements made at the close of the preceding chapter will be illustrated in this by showing their applicability to the method in which art deals with the sights or sounds of nature. According to Webster, *to represent* means "to present again either by image, by action, by symbol, or by substitute," and there is no possible use of natural forms in art that cannot be included under one of these heads. Imitation, which is, undoubtedly, a frequent process in art, can be included

thus; but so can many other processes that are not imitative. Representation has a broader applicability, and by using this term we can get something expressing the exact truth in all cases. An orchestral passage in an opera, or a declamatory scene in a drama, cannot, strictly speaking, copy or imitate, but it can *represent* an exchange of thought between a demi-god and a forest bird, as in Wagner's "Siegfried," or a conversation between historic characters as in Shakespeare's "Henry the Eighth." A painting of a man on canvas, or a statue of him in marble, does not, strictly speaking, copy or imitate a man, who, actually considered, can be neither flat nor white; but it does *represent* him. Columns, arches, and roofs do not, by any means, copy or imitate, but they do *represent* the trunks and branches and water-shedding leaves of the forest. Nothing in fact that a man can make of the materials at his disposal can, strictly speaking, copy or imitate in all its features that which is found in nature; but he can always represent this.

It is precisely for this reason, too, because art does and can represent, and does not and need not always literally imitate, that it appeals to the imagination, as well as issues from it. A literal imitation, leaving nothing for the imagination to do, does not stimulate its action. Whistles or bells in music; commonplace phrases or actions in poetry; and indiscriminate particularities of detail in the work of pencil, brush, or chisel, usually produce disenchanting effects entirely aside from those that we feel to be legitimate to art. This is largely because the artist, in using them, has forgotten that his aim is less to imitate than to represent.

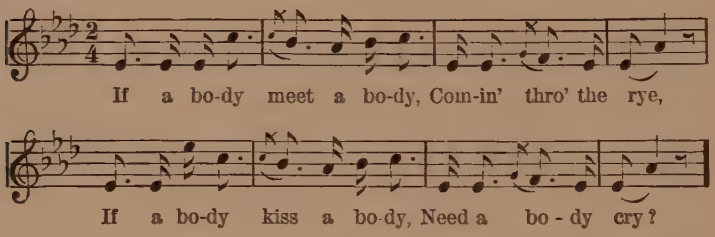
The fact that works of art represent explains, too, in

part, at least, the sympathetic interest which they awaken, —an interest often noticed and as often deemed essential. To what can this with better reason be attributed than to a recognition of the difficulties overcome—as must always be the case where a form of presentation is changed—when producing in one medium an effect that in nature appears in another medium; and to a consequent appreciation of the particular originality and skill of the individual artist who has overcome these difficulties?

To apply these statements to the different arts, it is mainly owing to a lack of all appeal to the imagination or to the sympathies, that accurate imitations of the sounds that come from birds, beasts, winds, and waters fail to affect us as do chords which are recognised to be produced by wind and stringed instruments in the passages descriptive of the influence of a forest, in Wagner's opera of "Siegfried," or in the "Pastoral Symphonies" of Handel and Beethoven. Nor can any number of tones imitating exactly the expressions of love, grief, or fright compare, in their influence upon us, with the representations of the same in the combined vocal and instrumental melodies and harmonies of love-songs, dirges, and tragic operas. The truth of this may be more readily conceded in an art like music, perhaps, than in some of the other arts; for in it the imitative elements are acknowledged to be at a minimum. To such an extent is this the case, in fact, that some have declared it to be *presentative* rather than representative, not recognising that a use of such elements of duration, force, pitch, and quality as enable us to distinguish between a love-song, a dirge, and a tragic passage would altogether fail to convey their meaning, unless there were something in the movement to *represent* ideas or emotions which we

were accustomed to associate with similar movements perceived in nature.

Among these movements of sounds presented in nature we may class, for instance, the intonations of natural speech, by which are meant the tones, but not the articulations, used in uttering series of words. Notice the following song. The words composing it can be talked in accordance with the notation almost as easily as they can be sung:



Comin' thro' the Rye: Scotch Melody.

What is true of this melody is true of almost every melody that proves to be permanently popular. Beneath what is sometimes great exaggeration, we can detect the intonations natural to the speaking utterance of the sentiments expressed. This is the same as to say that, in such cases, music, while in no sense imitative, is nevertheless representative of the intonations of speech. In other cases, it might be said to be a development of something that lies behind the intonations of speech; and which, though having the same cause, antedates them, *i. e.*, a development of humming in which almost every one, at times, indulges. A man, in the subjective, absent-minded condition in which he takes to humming, is usually unconscious of the presence either of surrounding persons or of sounds. He is not in a mood, there-

fore, either to address the persons distinctly, or to repeat the sounds accurately. But while this is true, it is also true that his method of expression will necessarily, not in a specific but in a general way, represent his surroundings. If he have ever heard, especially if he have heard frequently, sounds like the humming of bees, the whistling of winds or of railway locomotives, or the notes of squirrels, quails, whippoorwills, robins, catbirds, or of songs sung, or of exclamations or speeches made by men and women about him, in nine cases out of ten his own tones, at times unconsciously to himself, but nevertheless actually, will imitate some of these sounds, all of which, being external to himself, are, so far as he is concerned, those of external nature. Music, therefore, may be said to represent not only the natural intonations of the human voice, but natural sounds coming from sources that are not human.

But how, it may be asked, is it with poetry? Can the same principle be applied to this art? Why not? Even where sounds are intentionally suggested, as in the quotations on page 210, these are less imitative, in a strict sense, than representative. The same is true of figurative language which calls up to imagination certain scenes to which reference is made. How accurate is the picturing in the italicised words in the following; yet who can fail to perceive that each picture is produced by way of representation, and not, in any sense, of imitation?

> And multitudes of dense, white, fleecy clouds
> Were *wandering* in thick *flocks* along the mountains,
> *Shepherded* by the slow, unwilling wind.
> *Prometheus Unbound*, ii., 1: *Shelley.*
>
> I 've learned to prize the *quiet lightning* deed;
> Not the *applauding thunder* at its heels,
> Which men call fame. *A Life Drama*, 13: *Alex. Smith*

So with the general line of thought in a poem. An imitation so exact apparently that we should think it written down within hearing, of the ravings of a mad king, or of lamentations at the loss of a friend, would not appeal to us like what we know to be merely *representations* of these in the blank verse of Shakespeare's "King Lear," or in the rhyming verse of Tennyson's "In Memoriam." The talk of the phonograph will never be an acceptable substitute for the soliloquy or dialogue of the artistic drama or novel.

A like fact is true of the photograph. For the very reason that it is an imitation, in the sense of being a literal presentation, of every outline on which the light at the time when it was taken happened to fall, it does not awaken in us the kind or degree of imaginative interest or of sympathy that we feel in paintings or statues. In contrast to the impression received from a photograph, in gazing at these, we feel that we are looking through an artist's eye, seeing only what he saw or thought fit for us to see, and that everything in them is traceable to the skill displayed by him when transferring what in nature is presented in one medium into another medium, as when delineating flesh and foliage through the use of colour and when turning veins and lace into marble.

At the same time, so much in painting and sculpture suggests mere imitation, that some have held the theory that all its processes can be resolved into this. But is such a theory justifiable? Is not representation a better term to apply to some even of those processes that are the most nearly imitative? Think, for instance, what is done in the use of colour. For centuries those who tried merely to imitate this as it appeared in nature were not

successful. The blue of the sky and the bloom of the cheek were painted in hues altogether too deep and full. Sparkling effects like those glanced from waters were scarcely attempted. Nor did the earlier painters seem to recognise the varieties in these colours—the infinite number of tints and shades found in them when exposed to more or less sunlight. They could never depict aright the folds of drapery, the leaves of trees, or even the plain ceiling of a room where it was necessary to reproduce effects of illumination or reflection. Much less could they represent the larger play of light and shade, air luminous with sunshine or mellow in the moonlight. What hues could picture the effects of firelight or of shadows cast by certain colours or received on certain colours? Only many experiments could settle these questions. At last, it was science alone that seemed able to settle them beyond dispute. Then it was found that, in many cases, one cannot reproduce the effects of the actual colours in nature by merely imitating them; he must use other and different colours. For instance, a figure by Delacroix in a fresco in the cupola of the Library of the Luxembourg at Paris, on account of the influence of surrounding colours, is made to look flesh-like by being painted largely in tints of green. See Chapter XVIII. of the present volume, especially pages 371 to 374.

To appreciate how much more than mere imitation is involved, even in that part of the work of the painter which is acknowledged to be the most nearly imitative, let us glance at a few of the results of experiment and study in such work. To begin with, these have led to a recognition in the use of colour of what are termed *values*. This term undoubtedly grew out of the application to

colours of other terms like rich, full, deep, thin, weak. It would be natural to say that anything which could be more rich or full than another could differ from it in *value*. All such terms, however, when once used, come soon to have technical meanings. The meaning now attached to the term is indicative of the degree of light that is in a colour. In the foreground of a picture, where there is supposed to be the most light, rendering all things distinct, the colour is said to have more value than the same when in the background. The term is also applied to colourless drawings, but, in this case, a line that is in the foreground, where there is the most light, rendering it distinct, is, unlike a colour, darker rather than brighter. So we have the apparent anomaly of assigning the most value to bright colours, and yet to dark lines (see Fig. 2, page 3). A score or more of years ago the term was used to indicate differences between different hues; yellow, for instance, as containing more light, being said to have more value than green containing less light. At present, however, the word seems mainly used to indicate relations between different tints or shades of the same hue, *tint* being a term indicative of what contains more light, and *shade* a term indicative of what contains less light, than the hue itself does when it is what is termed *full*. As illustrating the very different effects produced upon the same colour by very slight changes in degrees of light and shade, excellent examples are afforded in every large picture gallery. For instance, in the picture in the Metropolitan Museum of New York, entitled "Gossip," by Carl Marr, dresses, a table-cloth, a window curtain, and many other articles placed side by side are all white. In another picture, entitled "A Spanish Lady," by Fortuny, the dress, laces, ribbons, and ornaments of jet are

all black; and in still another entitled "Monks in the Oratory," by F. M. Granet, the robes, seats, wainscoting, and other objects are all brown.

Another important result of the study of both painter and scientist is noticeable in the methods of representing, by means of colour, the effects of light and shade. The very earliest paintings of which we know—the Egyptian—contained no shadows whatever. The early Italians thought that they could depict the effects of light upon a fabric of any colour by white, and of shade upon the same colour by black. Of course, their method did not involve any study of what is now termed values. At present, it is customary to begin by recognising that the light and shade upon any scene in nature may be general and particular. That which is general is produced upon a scene or an object, as a whole, by some illumining agent, like the sun, the moon, a fire, or a candle. That which is special is produced by the different positions relatively to one another of different parts of the whole. A tree or a man, for instance, if depicted in sunshine, would each cast a shadow, and each with its shadow would illustrate the effects of general light and shade. But besides this, every leaf or limb of the tree is illumined with a light peculiar to itself, and casts its shadow on some other leaf or limb; and every feature in the countenance and every fold in the clothing of a man is either in extreme brightness, like the tip of his chin or nose, or in shadow, like a dimple of his chin or one side of his nose. In some of these cases, as, for instance, where sparkling effects are necessary, light can be properly indicated by white, and shade, as where surrounding colours are very dull, by black; in others, as where the light falls strongly on brilliant colours, the shadows must contain hues that

complement these (see page 372); but in many cases, especially where the light is not intense, it is mainly necessary to change the values of the same hues, making them brighter in more light and darker in less. To preserve the proper relations and proportions of colouring in each case is, of course, extremely difficult, and necessitates very careful observation of the conditions of nature. The main principle is that the brighter the illumining light, the greater are the contrasts both of shade and hue between the bright and dark parts and the more sharply defined are the lines of demarkation between them (see Fig. 2, page 3). Besides this, in any given scene, the influence of the light is such that, to be properly represented, the values need to be slightly and gradually changed at almost every point. The difference in a painting between the appearance of mere paint and the appearance of reality is largely due to these slight variations in values, producing everywhere, but especially in connection with thick foliage or folds of drapery, those subtle suggestions of the play of light and shade in which nature always abounds.

The representation of *shape and texture* is closely related to that of light and shade. It is the narrow or broad lines or circles of intensely bright and sometimes white colour, together with darker colours on either side or surrounding them, that enable us to perceive that an object in which they appear is intended to seem to have an edged or a rounded or circular shape, while similar characteristics, differently and more minutely distributed, enable us to recognise that the texture is intended to seem like that of silk, velvet, wool, wood, stone, soil, water, or clouds. We can recognise these facts, even from the corresponding effects as produced by

the use of the pencil in Fig. 3, page 19. The necessity of representing shape in painting was recognised very early in the development of the art, but there were no great painters of texture before those of the Netherlands, like Dou, Hals, Denner, Terborch, and Jan Steen. In recent times there are many who excel in producing these effects, noticeably Meissonier, Willems, Breton, Fortuny, Alma Tadema, Rousseau, and Troyon.

The use of values in the representation of *distance* has necessitated almost as much study as in the representation of texture. To begin with, remote objects are always in light that is comparatively dim; and, for this reason, their outlines are indistinct (see Fig. 2, page 3). But it took the world many years to recognise this. Some artists apparently have not recognised it yet. There is still a controversy, the results of which can be seen in every large gallery of modern paintings, between the advocates of what is termed the "classic" or "academic" line, and the "romantic," "picturesque," or "naturalistic." The former is a firm, clear line such as appears in the paintings of Gérôme (Fig. 4, page 41), Bougereau, and Cabanel. The other is a misty, indistinct line, such as appears in some of the works of Corot, Sargent, and Israels. Notice the left leg of the man in Fig. 5, page 61. The former line is necessarily the primitive one, the first impulse of any draughtsman being to separate an object distinctly from other objects. As we should expect, therefore, this kind of line characterises most of the pictures that have come to us from the ancients, as well as the rude sketches of the school-boys of our own time. But in the drawings of certain great masters, say Titian, Correggio, and Rembrandt, there is a tendency in the other direction. Only in modern times, however,

have the two tendencies developed into antagonistic schools,—the extreme advocates of the one, though they are not all called Pre-Raphaelites, showing an inclination to claim, as the modern painters who founded this school were accused of doing (see Fig. 6, page 71), that in a painting every leaf on a tree, every spear in a grass-plot, every hair on a head, should be distinctly and separately outlined; and the advocates of the other school showing an inclination to claim that in no case should any of these be so outlined, partly because they are not so perceived in nature and partly because, even if so perceived, they should not be strictly imitated in art, the object of which is to represent, and to represent not specific, but general effects (see Fig. 7, page 91; also 5, page 61). It seems as if, in this case, as usual, the extremists on both sides somewhat exaggerate the partial truth that they are trying to emphasise. Objects in very bright light and near at hand can be, and, if one be representing nature faithfully, should be delineated with well defined outlines. On the contrary, objects that are in dim light, as in the twilight landscapes of Corot, or objects that are remote from the observer, can be and should be delineated with indistinct outlines. Notice these conditions as indicated in Fig. 2, page 3. Among painters, Jules Breton is worthy of notice as particularly successful in regarding this principle. In many of his pictures the figures in the foreground are as clearly defined as in a painting by Meissonier, while those in the rear, in strict accordance with the conditions in nature, are outlined with great vagueness. One cannot avoid feeling that an artist who has thus reproduced the exact effects of nature must eventually rank higher than those who have allowed a mere theory to cause them to use either the

FIG. 7.—A STORM.—MILLET.

See pages 90, 94, 120, 190, 279.

"classic" or "romantic" line indiscriminately and universally.

There are other effects of colour that have only been discovered as a result of study. Take those of what is termed *aërial perspective*. The atmosphere is filled with particles that cause it to act like a veil obscuring the colours in the distance by depriving them of a part of their light. It therefore causes them, as distances increase, to become dimmer, and, in the remote distance, to become changed in hue. In an atmosphere pervaded throughout by the same general degree of light, yellow, which contains the most light of any of the colours, passes, in the distance, into darker yellow and orange-yellow; orange into red-orange; red into darker red; yellow-green, as often in the near foliage at sunset, into green, then into dark green, and in great distance, into blue and bluish purple, or, in the absence of sunshine, into grey. The local shadows cast by a hill, tree, or leaves in the greater brightness near at hand are darker than the shadows at a distance (see Fig. 2, page 3). The general shadows cast by the clouds do not necessarily have this effect. Often, in fact, by obscuring the sunlight near at hand and leaving it clear in the distance, in other words by changing the degrees of light in different parts of a landscape, they change the distribution of colours that have been mentioned. In an ocean view, for instance, light green is sometimes seen in the distance and deep blue near at hand. But as a rule the colours in aërial perspective will appear as has been stated. In regiments of soldiers marching toward us, all clad in scarlet, that colour seems brightest in the front rank, and gradually decreases in brightness till in the remote distance it may seem more like a reddish brown. This fact

will be found represented in several of the military pictures of Detaille. Even in the same room books of the same colour seem to differ, if one be a foot farther from us than another, provided always, of course, that they are illumined by the same degree of light. All these statements can be seen illustrated, by inspecting the works of artists like Rousseau, Daubigny, Millet, or Troyon, of the Fontainebleau-Barbizon school, the oriental pictures of Decamps or Fromentin, or the landscapes or interiors of more modern painters like Inness or Chase of our own country, Israels of Holland, or Lerolle of France. Those who have an opportunity to do so will be interested in noticing the effects of distance and space as produced by the latter, in the "Organ Recital," which is in the Metropolitan Art Museum in New York.

Distance has also another influence. This appears in what is termed *linear perspective.* If we look down a long street, the roadway or sidewalks of which are of uniform width, and the buildings along which are of uniform height, we find all the lines of sidewalks, curbstones, and roofs gradually converging in the extreme distance. In case two parallel lines are as near together as the two tracks of a railway, they may seem actually to meet in the distance. Notice the upper illustration at the left of Fig. 2, page 3. As the appearance indicated is universal in nature, of course art, in representing nature, must represent it also. Yet for centuries the proper method of doing this was not understood. Now it is known that if, from an imaginary vanishing point on which the eye, in gazing toward the back of a picture, is supposed to be fixed, radiating lines be drawn to the top and bottom and sides of a form represented in the foreground, these lines between the form and the vanishing

point will determine the top and bottom and sides of other figures, which, in the degree in which every dimension in them is made smaller than the form in the foreground, will appear to be, not less in actual size, but at a greater distance from the spectator. Notice the left upper illustration in Fig. 2, page 3. These laws of perspective are now so well known that their more simple effects are easy to produce. But some of them are exceedingly difficult. Take cases of foreshortening, for instance, like the representations painted by Michael Angelo on the ceiling of the Sistine Chapel of figures in all possible positions, standing, sitting, lying, and ascending in clouds,—could any one, unless very skilful as a draughtsman, produce with success such effects? Could he produce them at all, when working merely by way of imitation? Did anybody ever actually perceive figures in such positions?

There is another important effect in painting that is, perhaps, still less allied to mere imitation than any that we have yet considered. It is the effect of *life* or *movement*. The spokes of a wheel in a waggon, when standing still, have one appearance. What is their appearance when the waggon is under way? What is the appearance of a torch when waved through the air, or of the legs of a man or a horse when racing? What is the appearance of the leaves of trees or the waves of lakes when swayed by a tempest? Such effects are seldom seen with a distinct outline (see Fig. 7, page 91). To have this, an object should remain a certain length of time in one place. How can they be imitated? They cannot be. They can be merely represented. A rolling wheel is pictured, not as a compound of spokes, but as a sparkling disk, a waving torch not as a point of light, but as a

curve, and a moving form not as a stationary one, but disproportionately extended. Notice the left leg of the man in Fig. 5, page 61. It is evidently lengthened as it is, in order to represent two different positions which the eye is supposed to take in at one glance. "Let us look at these Arab horsemen of Fromentin," says Van Dyke in his "How to Judge a Picture." "The horse of this falcon flier going at full speed has been criticised, because, forsooth, the body is too long and the hindquarters are stretched out behind instead of being compactly knit together. . . . But stand back and see the effect of the whole. Is not the motion, the life, the fire, the dash superb? Could anything give us a better impression of the swiftness of flight?"

The desire to convey this impression of movement with its associated ideas of life and force largely accounts for the apparent lack of imitative accuracy as well as for the presence of unmistakable exaggeration in the works of such artists as Michael Angelo (see Fig. 8, p. 96); and also for these and for what seems to be a lack of distinctness in the paintings of Blake, Millet, Diaz, Corot, and Daubigny. As Van Dyke says, in his "How to Judge a Picture": "It is the attempt of every true artist to paint not reality, but the appearance of reality"; in other words, to represent, and not merely to imitate.

All that has been said of drawing in painting applies to carving in sculpture. The method of finishing surfaces in marble or bronze, whether represented in full or in part relief, is not determined by the requirements of actual imitation, but by the appearance that the result presents, as affected by the play of light and shade upon the surfaces, and the suggestions of shape, texture, perspective, life, or movement necessarily connected with

FIG. 8.—TOMB OF GIULIANO DE' MEDICI WITH FIGURES OF DAY AND NIGHT.—ANGELO.

See pages 95, 97, 224, 284, 295, 302.

one rather than with another mode of treatment. It would be difficult to find any human forms with muscles actually resembling those in the figures in Michael Angelo's "Tombs of the Medici," at Florence (Fig. 8, page 96). Yet the influence of light and shade upon the carving, when viewed from a distance, makes all seem wonderfully real. The perspectives represented in Fig. 9, page 97, or in Fig. 10, page 98, suggest shade and

FIG. 9.—THE SOLDIER'S RETURN. FROM THE NATIONAL MONUMENT NEAR BINGEN, GERMANY.

See pages 97, 225, 242, 279, 284.

distance as faithfully as if depicted on canvas; and the slightly elongated or contracted proportions in Baryè's bronzes of men and animals give effects of life and movement equal to any attempted in painting. Notice again Fig. 5, page 61.

Now let us turn to architecture. To recognise the imitative element in it look at Fig. 11, page 99. Here is stonework that looks exactly as if composed of wooden pillars supporting wooden rafters. Among the remains

of ancient architecture there are scores of examples of both interiors and exteriors corresponding in effect to this. Arguing, primarily, from them, it is now recognised with practical unanimity that the stone columns

FIG. 10.—EPITOMISED STORY OF ABRAHAM, ISAAC, AND JACOB.—RELIEF FROM BAPTISTRY, FLORENCE. LORENZO GHIBERTI.

See pages 97, 225.

and colonnades of the Greek temple (Fig. 28, page 219) were suggested by those of previous wooden structures, and that these were suggested by the series of poles, which themselves were suggested by the standing tree-trunks which supported the coverings of the primitive

hut (Fig. 12, page 100); also that the bending arches of the Gothic cathedral (see Fig. 51, page 266) were suggested by the manner in which the limbs spring from certain trees and bend over pathways on either side of which they stand; and, once more, that the sagging roofs, well-nigh universal in the oriental temples (see Fig. 52, page

FIG. 11.—CAVE OF ELEPHANTA, INDIA.
See page 97.

280), were suggested by the sagging canvas which covered both the small tents and the great tabernacles of the ancient nomadic tribes. Many claim, too, that there is not an artistic dome or spire which had not its ante-type in what may be termed a natural construction, because produced by the primitive man when giving expression to motives little more human than those which lead to the products of the bee or the beaver. See Chapter XX. of

the author's "Painting, Sculpture, and Architecture as Representative Arts." It is not necessary to argue that, in most of these cases, the artistic product is not strictly an imitation, but rather a representation of that which forms its model.

Nor is it necessary to do more than state that most of the representative effects already considered in painting

FIG. 12.—CHIEFS' HOUSES, KEREPUNA, AUSTRALIA.

See page 99.

have their correspondences in architecture. Effects of light or shade, shape or texture, and even aërial effects produced by colour in the one art, are paralleled by those produced in the other art by light or heavy porches, pillars, buttresses, or mouldings, as manifested in different materials, hues, or styles. A few words, however, may not be out of place with reference to effects of distance

and perspective as produced in architecture, especially as these effects are extremely important and are usually overlooked. By the ancient Greeks they were not overlooked; nor, as has been discovered recently, by the mediæval Gothic architects. According to Prof. W. H. Goodyear, eighty-five Gothic churches in Italy have floors rising from two to three feet between the front door and the chancel, while often the tops of arches above the nave descend correspondingly, — evidently to increase

FIG. 13. — PHOTOGRAPHIC EFFECT OF CURVED STYLOBATE AND COLUMN OF THE PARTHENON.

See page 102.

the effects of distance, according to the laws of perspective. These facts largely explain not only the superiority of the ancient and the mediæval architecture, but also the inability of artists of our own times to interpret all their methods. Many curves have been discovered in the older buildings where we should use straight lines, and many diversities of measurement where we should use uniformity. In the author's "Proportion and Harmony," and in Chapter XVI. of this book, such conditions are

shown to be the results of applying to architecture the laws of perspective rather than of proportion, as was once supposed. Notice an illustration of this fact, first, in the slight upward curve in the platform on which the columns of the Greek temple rested (Fig. 13, page 101), as well as in the horizontal line of the entablature below the pediment. Fig. 14, page 102, will show one—but not all—of the reasons assigned for this curve. The eye is a

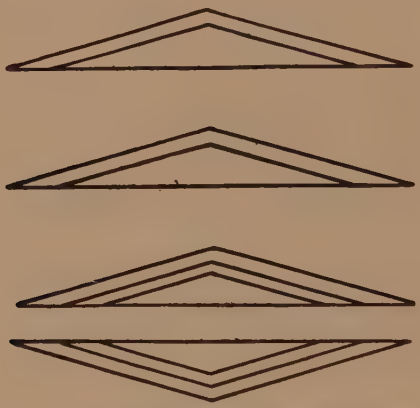


FIG. 14.—OPTICAL ILLUSIONS CAUSED BY LINES ARRANGED AS IN PEDIMENTS.

See pages 102, 103.

sphere, and, in the image of the external world reflected on it, any straight lines above or below the mathematical centre at which the eye gazes will appear to curve upward or downward. When the eyes are directed toward the upper triangle of Fig. 14, they are directed toward its mathematical centre; and the lower base line, of course, is below this centre. Observe, as a result, how this line, though straight, appears to curve downward, at its middle point. Now observe the second drawing in Fig. 14. In

this the lower line of the triangle is made to curve slightly upward at its middle point. As a result, this line no longer appears to curve, but to be straight. In the lower drawing of Fig. 14, two similar triangular figures are placed together, but the shorter sides of each triangle are emphasised by being tripled. This emphasis, according to a well-known mental law, renders it impossible for the mind, when comparing the two triangles, to confine attention to the single line forming the longer side of the triangle. The central point of attention, when looking at each triangle, is drawn toward its mathematical centre, and the two triangles are compared together as wholes. The effect produced by each triangle, therefore, is the same as that produced by the single triangle at the top of Fig. 14. In both the lower triangles, the long, straight line seems to curve away from the angle opposite it, and the two long lines,—one of the one triangle and, the other of the other,—though placed in a position where they are exactly parallel, do not seem to be so. Notice, again, the cornice curve discovered by Professor Goodyear in the Greek "Maison Carrée at Nîmes" (Fig. 15, page 104). The explanation for it is very clearly indicated in Fig. 16, page 105.

Similar facts explain differences in measurements in the same building. Penrose, in his "Principles of Athenian Architecture," says that, in the Parthenon, the spaces between the corner columns are only six feet and a fraction, whereas between the other columns they are eight feet and a fraction. This arrangement was evidently intended to make all the spaces seem of equal size. No other arrangement could have accomplished this result. Notice the divisions indicated in each horizontal line in each rectangle in Fig. 62, page 340. All

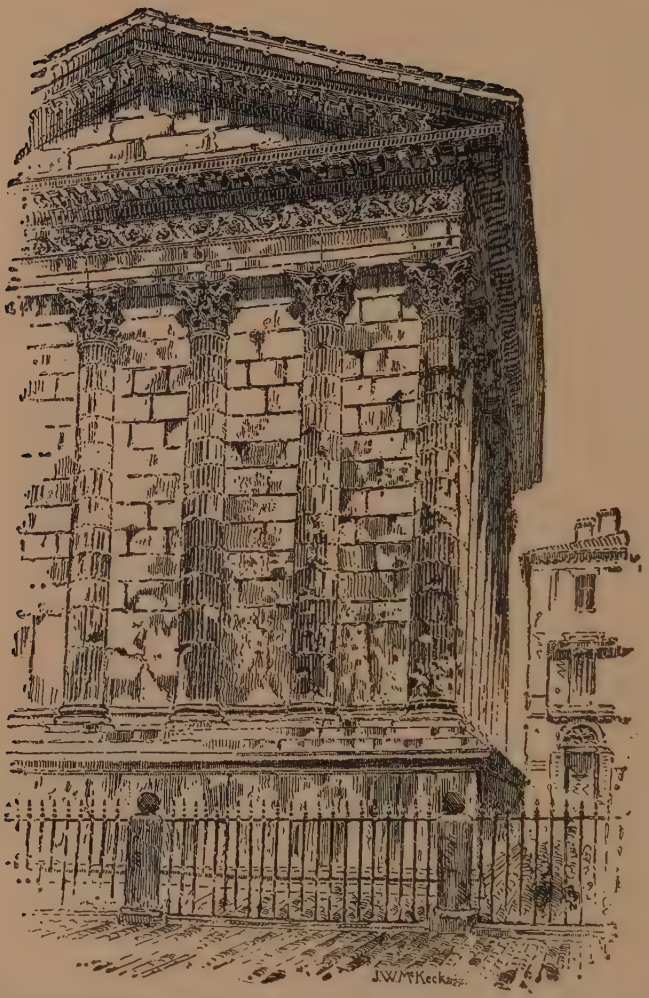


FIG. 15.—PHOTOGRAPHIC EFFECT OF CORNICE CURVE IN THE MAISON CARRÉE.—DRAWN BY J. W. McKECHNIE.

See pages 103, 126, 279.

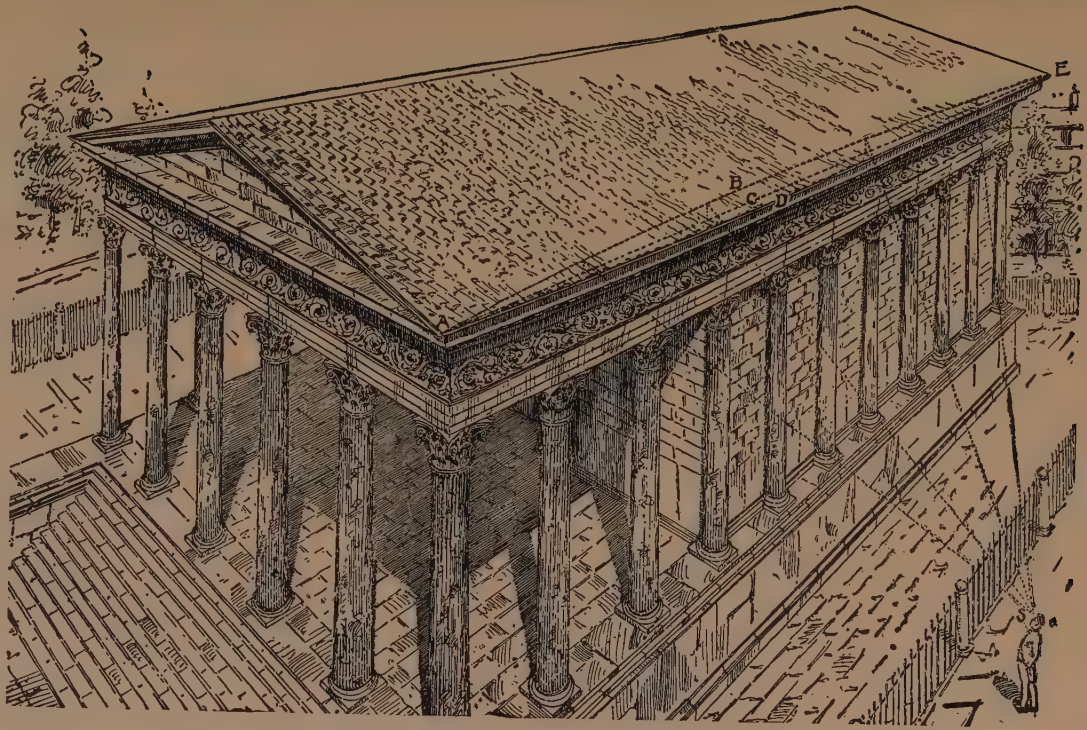


FIG. 16.—MAISON CARRÉE, NIMES, SHOWING CORNICE CURVE.—DRAWN BY J. W. McKECHNIE.

See pages 103, 106.

these divisions are of equal length. Yet it is impossible to look at them without suspecting that the divisions nearest the ends of the lines are the longest. This is the same as to say that to cause these end divisions to appear of the same length as the others, they should be made shorter. The reason why this is so is owing, of course, to the roundness of the eye. When we look at the middle of a horizontal line, there is actually more eye-surface covered by the divisions at the sides than there is by the divisions seen directly in front, which latter divisions are opposite that part of the eye which is most nearly flat. As the eye is rounded vertically as well as horizontally, a similar principle applies sometimes to vertical measurements.

In order to produce the differences in measurement of corresponding factors in different buildings, an architect need merely apply to architecture the same methods of carrying out the laws of perspective that are known to be applied in painting. In this latter art, it is seldom considered necessary to apply these laws with mathematical exactness. Each draughtsman, in arranging his outlines, feels at liberty to stand off from his drawing, and, as a result of repeated examinations and experiments, to use his own ingenuity. Indeed, he must do this, in any circumstances, because the required measurements differ with every foot by which he stands nearer to his product, or farther from it. Precisely so in architecture. Let the man in Fig. 16, page 105, step a few feet farther away from the building, and, in order to preserve the same effect, not only would the curve in the cornice have to be lessened, but the columns at either end of the colonnade would have to be brought nearer together. Let a temple placed upon the brow of a hill be intended to produce a

certain effect upon those ascending it and the pediment would have to be higher than if it were intended to produce the same effect upon those on a level plain. No wonder, then, that we find such variations in the measurements, and such apparent lack of meaning in the variations, as are indicated in the following, taken from Penrose:

BUILDINGS.	Actual length of the front or flank measured.	Actual rise above a straight line joining the extremities.	Proportional rise corresponding to a length of 100 feet.
Jupiter Olympus, stylobate, flank . . .	354.2	.25 nearly	.07
Theseum, stylobate:			
front	45.	.063	.140
flank	102.2	.101	.097
Parthenon, sub-basement, front . . .	104.2	.150	.145
flank	221.	.233	.105
stylobate, front . .	101.3	.228	.225 = $\frac{8}{35}$.145) very nearly
flank	228.1	.355	.156 = $\frac{3}{35}$.105) very nearly
entablature from east front	100.2	.171 = $\frac{3}{4}$.228	.171
do on flank restored.	227.	.307	.135
Propylæa, entablature from east portico . .	68.1	.119	.175

In the age in which the Greek temples were constructed, other artists believed—and why not the architect?—that a man should study upon a product, if he intended to have it remain a model for all the future. Is it not natural to suppose that in such an age the structural arrangements intended to counteract optical defects, or to produce optical illusions, or, as some think, to produce, in connection with these, effects of variety or of vagueness in line or outline (see page 89), were largely the results of the individual experiments of individual

builders? If not such results, why were they invariably different in different buildings? But if they were such, the predominating motive in the mind of the artist was not to imitate any particular form that he had seen before, so much as to represent its general effect. Thus, from the beginning of architecture in which we see the builder taking suggestions from primitive huts or from the trunks and branches of trees in nature, to the highest stage of its development, where we see him taking suggestions from the works of previous architects, we find him, in the degree in which he is a great artist, representing rather than imitating.

CHAPTER VII.

ART AS REPRESENTATIVE RATHER THAN COMMUNICATIVE OF THOUGHTS AND EMOTIONS.

Artistic Treatment does Not Increase, and may Diminish the Communicative Qualities of a Product—Art Involves Communication through Using or Referring to Natural Appearances; *i. e.*, through Representing these—Representation of Thoughts and Emotions through Sustained and Unsustained Vocal Sounds—Used Respectively in Song and in Speech—Music does Not Communicate, but Represents Underlying Tendencies of Mental Processes—Analogous to Natural Processes—Freedom of Imaginative Inference Stimulated also in Poetry, which should Represent, rather than Communicate—Illustration—Same Principle Applied to Whole Poems—The Moral in Poetry is Represented—Visible Arts Represent Thoughts and Feelings—Paintings and Statues are Ranked According to the Quality of the Significance which they Represent—Illustrated in Pictures of Flowers or Fruit—Of Natural Scenery—Of Portraits and Human Figures—Architectural Representation, and how it is Related to Musical—Representative Character of Foundations, Walls, and Roofs—Of Constructive Designs and General Plan—Communicative Effects of Such Representation.

JUST as *representation* is a more appropriate term than *imitation* through which to indicate the result of an artistic reproduction of the appearances of nature, so the same word is more appropriate than *communication* or any like term through which to indicate the artistic expression of thoughts or feelings. If this were not so, if the primary object of art were to communicate, then would it

not do this more successfully than do other forms of expression? But does art do this more successfully? To say nothing of music and architecture, which all men know to be very deficient in the matter of communicating definite information of any kind, do poetry, painting, and sculpture give a more satisfactory communication with reference to thought or feeling, in the sense of indicating more clearly exactly what a particular thought or feeling is, than do sounds and sights as they are used in ordinary speech and writing? The moment we ask the question, we are ready to answer, No. A frequent effect of making any method of communication more artistic is to make it less intelligible. As a rule, sighs, shrieks, wails, can communicate, and cause a listener to realise, too, the particular thought or feeling to which they give expression far more unmistakably than is possible for a musical passage, unaccompanied by words, whatever may be the amount of its hush, trill, force, or complexity. As a rule, a plain, direct utterance of sentiment, or statement of fact, is far more readily apprehended, if that be all that is desired, than the most imaginative effort of poetry. As a rule, a few objects carelessly but clearly drawn or carved, even if as rudely as in an ancient hieroglyph, a few tree-trunks roughly built together for support and shelter, can convey intelligence of their purpose much more distinctly than works of painting or sculpture or architecture upon which men have expended years of labour. Were the communication of thought or feeling the object of art, it would be a very senseless undertaking to try to attain this object and expend years of labour upon it by making the forms of communication from which art is developed less communicative.

Yet, evidently, these forms of natural expression—in

tonation, speech, drawing, colouring, constructing,—just at the point where most satisfactory as means of communicating thought and feeling, lack something that art needs. What is this? It is not difficult to tell, and is clearly suggested by all that has been unfolded thus far in this essay. They lack that which can be given, in connexion with expression, by the reproduction of the effects of nature. Penmanship and hieroglyphics lack the appearances of nature that are copied in painting and sculpture. Prose lacks figures of speech and descriptions that in poetry are constantly directing attention to the same appearances; and even the elements subsequently developed into music and architecture lack traces of a very keen observation and extensive use of effects in nature which would not need to be observed or used at all, were the end in view attainable by the mere communication of thought or feeling. Were communication the end of any art, the elaboration of the forms of nature would cease at the point where they became sufficient for this purpose. But it does not cease there, and it does not do so because art must express thought or feeling by way not of communication, but of *representation.*

Let us notice this fact, and certain legitimate inferences to be drawn from it, as applied, first, to the arts of sound. When a man, or any living creature, gives vocal expression to that which actuates him, there are two distinct forms which this may assume, both of which, however, all creatures cannot always produce. The sounds may be either sustained or unsustained. A dog, for instance, howls, and also barks; a cat purrs and also mews—the latter in both a sustained and an unsustained way; a bird warbles and also chirps; a man sings and also talks. Here, in the lowest and most elementary

forms of vocal expression, we seem to find that which separates musical notes from talking tones. It is a difference in that which is represented, and it is the only difference that does separate them. All the other distinctions that can be made between sounds characterise alike those of song and of speech. Sounds differ in time, force, pitch, and quality. According to the first, one sound may have more duration than another. Artistically developed, in connexion with force, this difference leads to rhythm. But there is rhythm in poetry as well as in music. According to the second, one sound may be louder than another. But this kind of emphasis is as common in conversation as in chanting. According to the third, one sound may be higher in the musical scale than another. Artistically developed, this leads to tune. But the voice rises and falls in speaking as well as in singing. According to the fourth, one sound is more sweet and resonant than another. But the differences between pure, orotund, guttural, pectoral, and aspirated tones are as decided as are those between the tones in different parts in singing and between the characters of the sounds produced by different musical instruments.

When we come to use the word *sustained*, however, we can say that in music a tone is sustained in time with a degree of force at one pitch and with one kind of quality, in a sense that is not true as applied to speaking. We may use articulated words in a song, yet there is a radical difference between singing them and talking them. If the different methods be representative, sustained sounds must represent something sustained, and the others something not sustained. As a rule, an internal process is continued or sustained because it is not interrupted. As a rule, too, that which interrupts is external

to the thoughts and feelings in which this process is going on. Interrupt the creature producing the sustained sounds,—go out at night and speak to your howling dog, take the milk from a purring cat, the nest from a warbling bird, or the plaything from a singing child,—and at once you will hear sounds of the other form,—barking, mewing, chirping, and scolding in words. We may say, therefore, that birds and men naturally sing to meet demands that come from within; they naturally chirp and talk to meet those that come from without. The sounds of singing continue as long as their producer wishes to have them; those of chirping or talking are checked as soon as they have accomplished their outside purpose, and are continued only by way of reiteration or change, in order to suit the changing effects that they are perceived to have upon the creatures or persons toward whom they are directed. Singing need not convey any definite intelligence, because there is no intrinsic necessity that anybody should understand it. Chirping or talking must convey definite intelligence, because this is its object.

These two conditions respectively correspond exactly, as will be observed, to those which underlie effects in music and in poetry. Music is often said to represent the feelings. But, as indicated on page 55, there is a certain degree of feeling under the mental process represented in any form of art. The exact truth with reference to music is that it represents certain classes of sustained and subjective feelings, joyous or sad, to which there is no outside or objective reason for giving definite or intelligible expression. Therefore, while other arts, by words, shapes, or colours, confine thought to some extent, indicating, as they do in no unmistakable way,

that of which one should think, music, when it has once stirred the emotions, leaves these to suggest whatever thoughts of joy or of sadness may lie nearest to the heart of the man who is under its control. The same strains may affect differently, so far as regards merely the form of thought, the experience of every one who listens to them. It may make a child think of his nursery, a youth of his school, a merchant of his counting-room. Yet, with all this, it would be an error to think that the mental influence of the art is slight. The story of the men hired to assassinate Stradella, who, after listening to his oratorio in Rome, dropped their weapons and became the saviours of his life, is only one story of a thousand evincing men's belief in the contrary.

Of course, this conception of music involves its representing something which, though in one sense indefinite, nevertheless is fitted to have what may be termed a definite tendency of effect. Why this is true can be shown only when we come, in Chapter XII., to analyse the elements of representative expression in music. At present, it is enough to point out that there are certain analogies between processes of the mind and processes of nature; and that these analogies can be and are represented in the best compositions. Here is part of a description of the meaning of the movements of a symphony, published in an article on "The Intellectual Influence of Music," by Dr. J. S. Dwight, in the *Atlantic Monthly* for 1870:

"How is it with us when a matter interests us and excites us to that pitch of feeling in which music steps in as the natural language? Our whole nature is engaged in it: reason, passion, frolic, humour, will. If a matter taxes our reasoning, truth-seeking faculties for one spell, it is

a law of our nature that we then quit thinking and only *feel* about it for another spell. We modulate out of the dialectic* into the religious and accepting mode.† It *was* an argument, an emulous labour of the brain; it has become a lyric of the heart, a prayer, a hymn. And then, the more we have been in earnest, the more naturally comes the reaction of frolic fantasy and humour, the more lively the suggestions and 'heat-lightnings' of a quick, surcharged, midsummer fancy—the *scherzo* humours that so often flash from characters of deepest pathos. But the circle of moods is not yet complete. Thought, feeling, fancy, are but phases of the living stream that yet must ultimate itself in action, must rush into *deed*, and so pour its life into the great ocean whence all proceed and to which all tend. That is the *finale*."

The freedom of inference just mentioned as characteristic of the effects of music is, to some extent, characteristic of the effects of all the arts. As intimated on page 80, these arts are representative for the very purpose of appealing in a stimulating way to imagination. What is imagination? It is the faculty of the mind that forms images. Of course, in the degree in which the appeal is made so definite that nothing, as we say, is left to imagination, it is not stimulated. Let us apply this principle now to poetry. Words apparently convey definite meanings, yet it is a fact that they can also be representative. If not, they are merely presentative or communicative, and, therefore, not poetic, but prosaic. To understand this distinction is necessary to an understanding of poetic art. Take, for instance, these verses by Longfellow. What he wishes to say is that death may overtake the artist before he acquires the skill on

*The *Allegro*. †The *Andante*.

which his heart is set. Had he merely communicated, or stated, this fact, he would have written prose; but he represented it, and therefore we call what he wrote poetry, *e. g.*:

> Art is long and time is fleeting,
> And our hearts, though stout and brave,
> Still like muffled drums are beating
> Funeral marches to the grave.
>
> *The Psalm of Life.*

Again, if certain persons be doing certain things, one who sees them will probably draw some inferences from their actions with reference to their motives, and he will have a right to tell his inferences—in prose; but not, as a rule, in poetry. In this, he must picture what he has observed, and leave others, as free as he himself has been, to infer what they choose. At the same time, in the degree in which he is an artist, his picture will be of such a character as to impel others to draw from it the same inference that he himself has drawn. Notice the following. The reader will remember, perhaps, that when Hall began to read, he described his poem as being "nothing worth." The mention of this fact will explain the use of the phrase "There, now,—that 's nothing!" in the quotation.

> Here ended Hall, and our last light, that long
> Had winked and threatened darkness, flared and fell;
> At which the Parson, sent to sleep with sound,
> And waked with silence, grunted "Good!" but we
> Sat rapt; it was the tone with which he read—
> Perhaps some modern touches here and there
> Redeemed it from the charge of nothingness,—
> Or else we loved the man, and prized his work;
> I know not; but we sitting, as I said,
> The cock crew loud: as at that time of year
> The lusty bird takes every hour for dawn;

Then Francis, muttering, like a man ill-used,
"There, now,—that 's nothing!" drew a little back,
And drove his heel into the smouldered log,
That sent a blast of sparkles up the flue;
And so to bed.

Mort d'Arthur: Tennyson.

Is not this simple tale of what was done, much more expressive than would have been a long prosy description of what was felt? This example shows, therefore, that poetry may be strictly representative of external sights and sounds,—may confine itself to that which reproduces for the imagination a picture; and yet may be equally and in the highest sense representative also of those ideas and feelings which exist in only the mind.

This same principle applies not only to single passages, but to whole poems. When Dante, Shakespeare, and Milton first conceived their greatest works, it must have been a *picture* that appeared to loom before their imaginations; and every poem, as a whole, even if as long as "Othello," "Faust," or the "Æneid," must furnish what may be termed a moving image of the action which it is designed not to state, but to represent. It is from this image that the reader must be able to draw whatever moral is to be indicated. The drama of "Othello," for instance, pictures to us, in such a way that we cannot fail to perceive, the successive stages of jealousy, as developed both in a frank, magnanimous character like Othello, and in a deceitful, malicious character like Iago.

Tennyson has well expressed this fact with reference to poetry in what he calls *The Moral* of his *Day-Dream.*

So, Lady Flora, take my lay,
And if you find no moral there,
Go, look in any glass and say,
What moral is in being fair.

O to what uses shall we put
The wildweed-flower that simply blows?
And is there any moral shut
Within the bosom of the rose?

But he has suggested in his next stanza another truth that needs to be considered in connection with the last, before all the facts concerning the functions of poetry in the world can be understood.

But any man that walks the mead
In bud, or blade, or bloom, may find,
According as his humours lead,
A meaning suited to his mind.
And liberal applications lie
In Art like Nature, dearest friend,
So 't were to cramp its use, if I
Should hook it to some useful end.

Now let us consider the application of this phase of our subject to visible forms. A little thought will cause us to recognise that it is impossible to take very great interest in a face, or figure, or even in a view of rocks, or foliage, or water, except as something in the expression of the face, or in the attitude of the figure, or in the arrangement or general effect of the objects comprised in the view, *strikes* us, as we say. This is a graphic way of affirming that thoughts and emotions are stirred to activity when the eye perceives objects, just as inevitably as rays of light surround a match when it is struck. Inseparably, in such cases two elements of interest are present. One is the result of the effect perceived by the eye; the other, of the effect experienced in the mind. What is true of these natural appearances, is true also of artistic reproductions of them. Why has the world sel-

dom, if ever, assigned the same rank to painters of merely flowers or fruits, or even of landscapes, that it has assigned to those, like Raphael, Titian, or Rubens, who have depicted the human figure? Why are the greatest names in the history of sculpture those whose statues are of men? It is as difficult—not only so but, sometimes, because their laws of proportion have been less studied, more difficult—to model the forms of animals.

The answer to this is that the world in general judges of subjects by the possibilities of significance in them. There are both greater opportunity and necessity for manifesting thought and emotion in connection with a landscape than with a dish of fruit or a vase of flowers; and in connection with human figures than with landscapes. Of course, many pictures of fruits and flowers are superior, as works of art, to many pictures of human figures; but in case of equal skill displayed in the representation of form, the art-work ranks highest which necessitates thought and emotion of the highest quality. This principle enables us to rank as subjects not only flowers and fruits below landscapes, and landscapes below human figures, but to rank below others certain products representing exactly the same objects. For instance, flowers, oranges, grapes, apples, or wine or beer in a glass,—all these may be portrayed so skilfully as to be exceedingly artistic. But it is easy to perceive that the appeal of the picture as a thing of significance may be differently determined by different circumstances. A vase of flowers represented as being in a room upon the sill of a closed window, beyond which, outside the house, can be seen snowdrifts and frost-laden trees; or fruits and viands represented as heaped upon a table where nevertheless a half-empty plate and glass and an unfolded

napkin give evidence that some one has already partaken of all that he wishes, with, perhaps, a window near by, through which a half-starved face of a child is wistfully peering,—arrangements like these, or hundreds of a similar character, which might be thought out or felt out, would put thought and emotion into the picture; and thus make it representative of these. Can anybody deny that pictures thus made significant by means of arrangement, if equally well executed, would rank higher than pictures merely imitative?

If this be true of representations of fruits and flowers, it must be still more true of those of natural scenery. It is possible for a painter to imitate the outlines and colours of scenes that he sees before him, without reference to any consciousness of receiving or conveying impressions of thought or emotion in connection with them. But the greatest painters do more than this. "The Storm" of Millet (Fig. 7, page 91) is not a great picture; but it deserves a higher rank than it might otherwise deserve on account of the apparent human influence which has made a unity of its every suggestion. In the "Landscape with Waterfall" of Ruysdael, in the National Gallery in London, the ground, trees, clouds, and atmosphere seem filled with water; and in his "Jewish Cemetery" in the Dresden Gallery (Fig. 17, page 121) the profound melancholy of the whole is only heightened by the contrasting light of the pale sunbeam that falls upon some few tombstones, and of the rainbow in the rear. All things else,—the decaying gravestones, the decaying building, the decaying tree, barkless and crooked; and, not only these, but, in strict analogy with them, the clouds and water, too, under the influence of wind and current, are absolutely congruous in their general effects.

In Claude's "Morning" in the Dresden Gallery, we have represented not only in a yellow sky the dawn of the day, but suggestions of the dawning or beginning of

FIG. 17.—JEWISH CEMETERY.—J. RUYSDAEL.
See page 120.

many other things—as, for instance, in a lake the beginning of a river; in a shepherd playing on his pipe, the

beginning of music; in a maid sitting beside him, the beginning of romance; in a basket, as yet unopened, covered with a white cloth, as well as in another maid, drawing water from a well, the beginning of social feasting; in a castle built in an early style, the beginning of art or architecture; in a city faintly seen at a distance, the begin-

FIG. 18.—CARD PLAYERS.—CARAVAGGIO.
See pages 123, 192, 243.

ning of civilisation; in a group called the Holy Family, because of its resemblance to this, as conventionally depicted, the beginning of religion.

When we come to pictures into which, as into this last, human figures are introduced, there seems to be no end

of the ways in which they can be made representative. Notice what is said on page 192, of the portraits of Titian and of Reynolds; and on the same page of the "Card Players," by Caravaggio (Fig. 18, page 122). Consider, too, the statue of the Laocoön (Fig. 19, page 123). Can any one fail to recognise how largely its excellence is owing to the clear and emphatic way in which it represents certain thoughts and emotions? Again, take the picture represented in Fig. 20, page 125, used here by the kind permission of its owner, Mr. Charles T. Yerkes. In this picture a fashionable woman is represented as having left her carriage in charge of her coachman and footman, and seated herself in a park on a bench large enough for two. For whom is she waiting? What is her ideal? Just above her is a statue of a man without a head, but holding, where his mouth should be, a flute,—a man without a head who nevertheless is ready to pipe for her! Without using any means to which any one could object on the ground of its not being appropriate for the art of painting (see page 159), this picture outlines a story as clearly

FIG. 19.—SCULPTURED GROUP OF THE LAOCOÖN
See pages 123, 193, 224, 295.

and completely—and very much in the same way—as one of Heine's lyrics.

Architecture may produce the same effect as that which we have just been attributing to the other arts. One may have merely constructed a box. But the way in which he has done this, to some extent, represents him. If, in addition to what is useful, he have produced what is ornamental, if he have laid out a flower garden or carved the lid of a box, then his product represents him still more,—shows something more about his nature, tastes, feelings, and susceptibilities for sentiment. Architecture, like music, represents, not a responsive and unsustained, but a spontaneous and sustained mood. In both arts there is less conscious imitation than in the other arts, and, in both, such effects as are imitated, after being developed in part, continue to be developed, to a degree not true in the other arts, according to an inward law of their own. Using as a theme a few notes representing a mood of mind as indicated by a song of nature, the musician goes on to compose a whole symphony to correspond with them. So, from a few outlines of windows, doors, or roofs, the architect goes on to construct a whole building to correspond with these. This method he applies not only to the development of new forms, but to the ornamentation of old forms. In doing this, he merely carries out a principle exemplified in the action of the human mind in any like relation. For instance, a man, for practical purposes, produces a piece of woven cloth or something made through the use of it. That the cloth may not ravel at its edge, a section of it is purposely unravelled there, or a hem is made here, or, if two pieces of cloth be used, a seam is produced where the

FIG 20. A SUMMER EVENING.—VAN BEERS.

See page 123.

two are joined. After a little, according to a law which the mind always follows, the imagination begins to experiment with these necessary contrivances, and then the unravelled edge, the hem, the seam, each respectively, becomes a fringe, a border, or a stripe; *i. e.*, each is developed into one of the well-known ornamental resources of the art of the tailor or the upholsterer. It is the same in architecture. When the imagination begins to play with the underpinnings of buildings, or with the means of approaching and entering them, it gives us foundations, steps, or porches; when with the parts upholding the roof, it gives us pillars, pilasters, or buttresses; and when with the tops, sides, and bottoms of openings, it gives us caps, or sills of doors or windows; when with the roof and its immediate supports, it gives entablatures, eves, gables, domes, or spires.

All these features, moreover, are representative. If the foundations be apparent and large, they indicate support and sufficient support (Fig. 15, page 104). If the steps or entrances be broad, they indicate accommodations on the inside for a multitude (Fig. 34, page 227). If the windows be high or wide, they indicate a high or wide room on the inside (Fig. 29, page 220). In thoroughly successful architecture, the walls are especially transparent, as it were, revealing all the internal arrangements. Horizontal mouldings or string-courses show where the floors are, and vertical buttresses or pilasters, where are the partitions. Notice how the floors and walls of every room in the interior seem to be represented in the façade of the University at Sydney (Fig. 21, page 127). Roofs, when artistic, are visible. In public buildings, at least, they should indicate the shapes of the ceilings under them. A dome is out of place unless it span a vast

FIG. 21.—UNIVERSITY AT SYDNEY, AUSTRALIA.

See pages 126, 252, 310.

space; and towers and spires are inexcusable unless they be adaptations of features that are useful.

When an experienced traveller comes upon even ruins, he draws certain inferences from the appearances that they present. Judging merely from these, he says, for instance, with reference to the methods of construction, that some particular pillar, bracket, lintel, arch, was shaped and placed as it is in order to furnish just the support needed for some particular weight or arrangement of material which is over it. Or he says that some particular foundation was laid as it is in order to suit some particularly rocky, sandy, or marshy soil; or that some particular roof was pitched as it is in order to fit a dry or wet climate, to shed rain or snow. Or, judging from arrangements of doors or windows, he says, with reference to the general uses of a building, that some particular part is an audience hall, a chapel, or a picture gallery. Even if he find nothing except foundations, he often declares this to be a theatre, and that to be a temple, or a bath, or a private house; and not only so, but sometimes, as at Pompeii, he tells the purpose of each of the different rooms of the house.

Observe that, in all these ways, it is possible for a building to be representative; moreover, that, just in the degree in which it is so, the interest awakened by it is enhanced. It then comes to have the same effect upon us that would be produced did its builder stand by us and tell us exactly what his thoughts were when designing the arrangement that we see. It is as if he were to say: "I had a conception that it would be a good idea in this position to have an arch projected so, or a ceiling supported by a bracket inserted so; or a foundation in soil like this laid so; or a roof in a climate like this shaped

so; or a chapel for a sect like this planned so; or an audience hall for an assembly like this arranged so." And the more one knows of architecture, the more innumerable will he recognise to be the thoughts and, in the degree in which ornamentation is increased, the æsthetic feelings that it is possible for the architect to represent through these apparently lifeless forms of wood or brick or stone.

CHAPTER VIII.

ART AS REPRESENTATIVE RATHER THAN PRESENTATIVE OF THE PERSONALITY OF THE ARTIST.

Relation of Art to the Artist—Art Emphasises the Fact that Natural Factors are Used for Expression—This Fact Reveals a Spirit Capable of Expressing Thoughts and Emotions—Why High Art Uses Forms Other than those Belonging to the Artist's Own Body—Connection between the Creative in the Divine and in the Artist—Both Necessitate Representation—Representation of Spirit and of the Subconscious Nature—Connection in Art between Personal and Sympathetic Effects—Explanation—How Art can Represent Appearances as they Affect the Individual, and yet as they Affect All—Owing to Artist's Sympathetic Temperament—What is Genius?—Its Effects Representative of the Individual, and yet of Men in General.

IN Chapter I. it was said that art of the class which we are considering necessitates an external product, like a poem or a painting, as distinguished from an effect produced, as in elocution or pantomime, by the movements of one's own body. This is equivalent to saying that art of the highest rank, in addition to representing rather than imitating the phenomena of nature, and to representing rather than communicating thoughts and emotions, must represent rather than present the personality of the artist, meaning here by the word *personality* that combination of spirit and body which belongs to oneself as an individual, and to no one else. To understand why personality should be represented rather than presented, let us recall, for a moment, what was said in

Chapter III. There, the impulse to art was attributed to life-force or energy issuing from the subconscious or spiritual nature, and striving to embody itself in the material. We all know that the spiritual itself cannot appear,—it can merely represent itself in the material. At the same time, of course, representation is involved, to some extent, in every form of expression. All thoughts and emotions, as they exist in the mind, are inaudible and invisible, and, in order to be communicated to others, they must be symbolised through sights and sounds borrowed from nature. But there is a different use of these latter in ordinary expression, and in that of art. In ordinary expression, it is sufficient that the thoughts and emotions should be clearly presented. Upon artistic expression, as in that of a poem or a statue, years of labour are frequently expended in order to secure a result beyond that of mere clearness of expression.

Upon what is it that the artist, in such cases, expends his labour? Of course it must be upon that which the expression contains in addition to the thoughts and emotions. What does it contain in addition to these? Nothing more, certainly, than the expressional factors. As it is not the thoughts and emotions, it must be the expressional factors that are intended to be emphasised; and when we recall that it is the expressional factors that are repeated in art, and to what an extent all art involves repetition (see page 270), and that, as a rule, repetition necessarily emphasises, we shall recognise the truth of this inference. But why should expressional factors, aside from that which they express, be emphasised? For no reason, of course, except to emphasise the fact that they are expressional, which fact, as will be noticed, is unimportant except so far as it involves the existence of

something behind them, *i. e.*, of a mind capable of using them for this purpose. But what interest has the artist in manifesting, or the world in knowing, that certain forms of nature are factors used for the purpose of expression by a mind behind them?

In answer to this question, let us ask another,—Are there any problems of life of interest so profound as those which have to do with the relations of mind to matter? Must it not be a fact that mortals conscious of a spirit in them struggling for expression, feel that they are doing what becomes them when they give this spirit vent and with earnest care for every detail elaborate the forms in which they give it this? What are they doing when thus moved but objectifying their inward processes of mind; but organising with something of their own intelligence, but animating, with something of their own soul, the forms of material nature that are about them.

Now notice that these effects will be emphatically produced in the degree alone in which the material forms which one uses in his art are not those belonging to his own material body. Every man gives expression to his spirit through using his own body. To give such expression in the most emphatic way, one must do it in an exceptional way; and this can be done alone when, unlike ordinary men, he uses forms that are not an organic part of his own nature (see page 10). Evidently, too, in this case, the external material forms thus used cannot be said to present—they merely represent—himself.

In our first chapter it was said that the arts cannot create. But it was not said that they cannot be creative. If by the creative we mean the power which seems to represent divine intelligence through the sights and sounds of nature, what can more resemble this than can

the power of him who makes a further use of these same sights and sounds for the purpose, through them, of representing the processes, which otherwise might not be manifested at all, of his own thoughts and feelings? Is it strange that he should take delight and pride in work like this, and in connection with it feel the sources of the deepest inspiration stir within him? Who is there that could not draw delight and pride and inspiration from the consciousness of being in the least degree a follower, an imitator, a child of Him who created the heavens and the earth?

It is no wonder that men attribute the products of the great artists to "the faculty divine," or the "inspiration" of genius. "I tell you," said King Henry VIII. to a nobleman who had brought him an accusation against the painter Holbein, "I tell you of seven peasants I can make as many lords, but of seven lords I could not make one Holbein." There is a real, though subtle correspondence between the works of the Creator and the creative works of art. And just as the former reveal the presence of the divine spirit, so the latter reveal that of the human spirit. Precisely, too, as the divine spirit is not presented, as we might say, through material forms, but merely represented through methods of movement and formation, so with the human spirit. When we say that a poem is Miltonian or Shakespearian, we refer less to the subject-matter of the work, than to the method represented in its style and composition.

Now we come upon two apparently anomalous facts. One might suppose that representation, exerting, as it does, an indirect influence, would reveal less of an artist's character, and would also appeal less to the sympathies of others, than would presentation, exerting, as it does, a

direct influence. But the truth seems to be the contrary. Nor, when we think a moment, will it seem surprising that this is so. As applied to the revelation of character, it is simply a fact that all of us, in determining what a man is in his spirit, intentionally or unintentionally, judge him by what he appears to be in his subconscious rather than in his conscious nature; therefore more by what he unconsciously represents of himself than by what he consciously presents. This is true in every relation of life. No man ever fell in love with a woman because of her words or deeds that he supposed attributable to conscious intention. So with the products of art. The most professionally trained dancers and singers who prove fascinating to us do so because of slight unconscious peculiarities of movement in body or voice which are characteristic of them as individuals, and cannot be acquired by another with another personality. This fact is true of the effects of any kind of expression embodied in any kind of form. The chief charm of a melody, poem, painting, or statue, even of a building, often lies in certain subtle touches given to it by its producer unconsciously,—in characteristics which it is sometimes impossible for the critic to analyse or even to describe. Yet it is these touches that most surely convey the impression of the artist's individuality. Need it be said that they do not present his conscious intention? They represent his unconscious method, a method that he cannot, so to speak, avoid.

Closely connected with the apparent anomaly just considered is the other of which mention was made. One might suppose that indirect representation—*i. e.* expression made through the use of forms not at all associated with those of one's own body—would appeal less to the

sympathies of others than would direct expression, or what has been termed presentation. But this supposition, again, would not be entirely correct. Owing to the personality of effect indicated in the preceding paragraph as characterising representative expression, this latter sometimes makes a stronger appeal to the sympathies than does the other form of expression. We all, to an extent, recognise this fact when we quote with approval the maxim that actions speak louder than words. As applied to art, when methods characterising a product have been made characteristic of an artist's personality, others must be influenced by the product as they would be by his personality. But how are they influenced by this? How do any of us come to possess an ideal—or come to take an interest of any kind in anything—that is peculiar to the personality of another? There is but one answer: It is through our sympathies—a word which, as thus used, applies primarily to our emotions, but includes also our thoughts, as influenced by these. For examples to illustrate this appeal of art to the sympathies, notice the way in which Tennyson begins his "Gardener's Daughter":

> This morning is the morning of the day
> When I and Eustace from the city went
> To see the Gardener's Daughter; I and he
> Brothers in art; a friendship so complete
> Portioned in halves between us, that we grew
> The fable of the city where we dwelt.

And how Browning begins his "Ring and the Book":

> Do you see this ring?
> 'T is Rome-work made to match
> (By Castellani's imitative craft)
> Etrurian circlets found, some happy morn, etc.

* * * * * *

> Do you see this square old yellow book, I toss
> I' the air, and catch again, and twirl about
> By the crumpled vellum covers—pure crude fact.
>
> * * * * * *
>
> Examine it yourselves! I found this book,
> Gave a lira for it, eight pence English just.

These passages read as if the writer subconsciously desired to take us into his confidence,—as if he felt us to be on a level with his own plane of thought, and believed that we should understand his feelings in the circumstances, which therefore he need not describe to us. The explanation of the method seems to be that, as human beings, men crave sympathy not merely with the voluntary movements of their minds, but often with the involuntary. The universe, too, which surrounds them is a constant mystery and source of speculation. They believe that there are causes for its forms and movements, spiritual meanings back of its material symbols. Yet these are apprehended only vaguely, looming dimly, as they do, from the regions of the unseen. Accordingly when men whose subconscious or hidden intellection seems able to commune with these regions, embody their vague conceptions in forms of art, appealing in such ways as to reveal to another what accords with his own subconscious impressions, it is inevitable that his soul should experience intense satisfaction. He feels that his own impressions have been confirmed by another's intellect not alone, but at the same time have been felt also by another's heart.

At first thought, the principle previously stated, namely, that the art-product is successful in the degree in which the artist represents his surroundings in such ways as to manifest his own personality, by which must

often be meant his individual thoughts and emotions, seems to conflict with the principle just unfolded, which attributes his success to the degree in which the conceptions that he embodies are not merely his own, but those of others. Second thought, however, will convince us that the two principles conflict only seemingly. In practical experience, no one has any difficulty in recognising the individuality of a Raphael and a Shakespeare in almost every product of their skill; yet this does not prevent the product from being an accurate representation of nature as viewed by all men. Painters, sculptors, dramatists, are greatest when most thoroughly themselves, yet greatest also when their minds, like mirrors, reflect their surroundings in such ways as to conform most exactly to the observations of the world in general. The reason for this, of course, is that no conceptions of the meanings of nature can be universally accepted, except so far as they have been derived from the appearances of nature as universally perceived.

These statements direct thought back at once to what was said in Chapter III. with reference to the sources of art in artistic emotion, and hence in temperament. One who is to preserve his own originality, and yet, at the same time, derive from the forms and suggestions of nature the same conceptions that others derive from them; one who is to have the personal force to incorporate in a form peculiar to himself that phase of truth, natural or spiritual, which most readily commends itself to all, must evidently be a man of sensibility, as well as of rationality, a man able to sympathise as well as to infer. Only such a man can be conscious of almost every influence at work on every side of him, and yet throw all the energy of his subconscious or involuntary mind, as

we have found that the artist must do, into the expression of the fact. Only such a man can be controlled by his surroundings, and yet manifest the freedom from control which is essential to that play of the mind which is characteristic of all imaginative results.

Accordingly we must conclude that here, too, as well as in connection with the conditions mentioned in Chapter III., we have revealed a sense in which every artist, as well as poet, is "born and not made." At least it must be true that, so far as he is made, his training must be such as to increase his inborn capabilities of being aroused by the appearances about him to subconscious and involuntary intellection in harmony with suggestions legitimate to these appearances. This is about the same as to say that the great artist must have within him the possibilities of genius. For what is genius? The term is derived—through the Latin word *genus*, meaning something characterised by the source of its begetting or production, therefore a *family*, *race*, or, in this sense, *kind*—from the word *genere*, meaning *to beget* or *to produce*. The word *genus* seems to combine, therefore, the ideas both of *kind* and of *production*. It means *the kind that is produced*. The termination *ius* means *belonging to*. Therefore, *genius* means something *belonging to the kind that is produced*. All recognise that by the *genius* of an age or a race, as when we say "the genius of the English people," is meant the kind of production in thought, word, deed, invention, or composition, that belongs to the age or race. And *a genius*,—what is he, but some one man who is the source of this kind of production?—a man whose feelings, aims, opinions, deeds, or words are true representatives of kinds that belong to his age or race? Was not this true of Homer, Pheidias,

Raphael, Milton, Mozart, Goethe, and Beethoven? Could their works have appeared except when and where they were produced? And if we want to find out what was *the genius* of the age of each, do we not examine what was done by these men and by others who were typical of their age? And is not this one reason why we term these men *geniuses?* But, of course, there is also another reason, yet it is connected with this. As indicated in Chapter IV., a man is considered to be a genius in the degree in which he is able to give unimpeded outward expression to results coming from the hidden sphere of mind. But this sphere is occultly connected with the whole hidden or spiritual sphere of nature. The genius, therefore, is a man whose temperament makes him one of his kind, and therefore makes his products reflect the fact, in the sense of inclining him to be influenced as are other human beings, and as are also all the animate or inanimate developments of life that is not human. The word *genius* is sometimes used for the word *spirit*. Why is this except because genius tends like spirit to make the mind work in harmony with what may be termed the Mind in nature, and hence with the Spirit, or, if we choose to be polytheistic, the spirits in nature, of which Milton sings when he says?—

> And as I wake, sweet music breathe
> Above, about, or underneath,
> Sent by some Spirit to mortals good,
> Or th' unseen Genius of the wood.
>
> *Il Penseroso.*

The genius's interpretations of nature commend themselves, therefore, both because nature makes the same appeal to him as to others through its visible forms, and also because it causes a unity of action between the sub-

conscious processes of his mind and its own—*i. e.*, nature's own—invisible processes. This unity of action results in expression which is artistic inasmuch as it is characteristic of the individual artist, and yet is also natural inasmuch as it is characteristic of what is experienced by men in general, the representations of art, notwithstanding the intervention of human skill, appearing to spring up and flow forth to influence as naturally as fountains issue into streams and buds burst into blossoms. As a result, the art of any age is the blooming and fruitage of the influences of nature and humanity that have been at work on every side throughout long centuries.

CHAPTER IX.

THE DIFFERENT ARTS AS REPRESENTING DIFFERENT PHASES OF MENTAL CONCEPTION.

The Art Used in Expression is Often Determined by the Thought or Emotion to be Expressed—Form of Expression Appropriate for Each Stage of Any Given Experience—Physical Thrill, and Vocal Expression Leading to Music—Definite Opinions, and Verbal Expression Leading to Poetry—Conflicting Opinions Leading to Oratory—Contemplation of Facts as they Appear Leading to Painting and Sculpture—Planning and Re-arranging Leading to Architecture—Relations of External Influence and States of Consciousness as Represented in Each Art—Mental Contents and Influence from Without Compared to Ice on Water Flowing into an Inlet—Conditions Corresponding to Music, Poetry, Painting, Sculpture, and Architecture—Testimony of Physics—Largest Nerve-Movement in Music, Less in Poetry, Less Still in Colours, Least in Lines—Nerves are Directly Conscious of Vibrations in Sound, as in Thunder, but not of Vibrations in Colours—This Fact Illustrated Mythologically and Medicinally—Mental Facts Accord with what has Preceded—The Indefinite is Represented in Inarticulated Music; the Definite, in Articulated Poetry—Difference in Representative Effects of Words and Tones—Is a Difference between Visualising Thought and Not Visualising it—Illustrations—Non-Imaginative Effect of Poetry that does Not Suggest Sights—Non-Success of Poetry too Exclusively Musical.

IT has been shown that the artist represents the sights or sounds of nature in order, through them, to represent his thoughts or emotions. This statement at once suggests that certain classes of natural phenomena, and therefore certain forms of art, differing, say, as music from painting, must be better fitted than are others for the representation of certain phases of thought or

emotion. Let us consider this suggestion. We shall find it introducing us to a very interesting and important field of inquiry. Our first conception would be that the sight or sound perceived in nature would of itself indicate the forms in which the thoughts or feelings awakened in connection with it should be reproduced in art. Such is sometimes the case. It would always be the case, if art were a mere imitation. But, whether imitative or not, art is also an expression of thought and emotion, and, because it is so, the form used must, at times, be subordinated to the requirements of that which is to be expressed. To illustrate this, suppose a man to have listened to the story of a battle. It might be presumed that a representation of what he has heard would also assume the form of a story, and therefore be artistically expressed in a poem. But often the effect of the story upon his imagination, as also of his imagination upon it, is such that what is experienced can be represented truthfully only through a picture. Again, it happens sometimes that the forms through which the effects have been exerted, have lingered so long in his mind, and experienced so many modifications there that, though critical analysis may detect, as in architecture and music, that the effects produced have been suggested by forms in nature, the artist himself is unconscious of what these forms were. Let us develop this idea, and show its relations to the form of representation manifested in each of the arts. As a result, we shall find that all these are elaborations of instinctive modes of expression which, in certain circumstances, the mind is forced to adopt. To make this fact clear is evidently to bring to light principles that lie at the very bottom of our subject, and which, when seen in their true proportions and relations, will

reveal a sure foundation on which to base all that can be affirmed of the thoughts and emotions fitted for representation in each art.

Let us consider, then, at first briefly and superficially, which is all that is necessary at this stage, the general order of development of representative modes of expression in the case of an individual influenced by some specific event or series of events. Suppose a man to be in a crowd composed of persons of conflicting opinions with reference to some subject mentioned. Suppose that a statement be suddenly made there—as was done in so many places in our country in 1861, when Fort Sumter fell—that some flag has been fired upon, or some fortress attacked. Of course, the effect of the news will differ in different individuals; but let us observe its influence on the average man strongly interested in what is thus brought to his notice. Is it not true that this man will first experience a thrill or shock, as if his nervous system had been physically shaken? At the same instant, from him, or at least from some parts of the crowd, will arise sounds of approbation or of disapprobation, cheers or hisses, followed by exclamations more or less inarticulate or incoherent, according to the degree in which the one uttering them is more or less excited. This condition evidently can have no artistic expression unless it be in music. In fact, it was in song that the crowds on Wall Street, New York, invariably expressed their first impressions during the American civil war, when receiving news from the army, especially, of course, when receiving news of victory; but they kept up their courage in the same way, also, when receiving news of defeat.

But let us pass on. Immediately after the period of

indefinite sounds will come definite expressions of opinion. Now notice that the more excited the men uttering these, or listening to these, happen to be, the more figurative, as a rule, will be their language. This or that must be done "like this or that," will be the formula upon every lip. There is no need of stopping to argue that such figurative language is the mode of representation naturally developed into poetry.

At the stage next after this, expressions of opinion uttered freely in a crowd mixed like the one that we are considering, will lead necessarily to altercation, disputation, and, if practical interests be involved, to efforts at persuasion. Here evidently, as it is well enough for us to observe in passing, are the modes of representation natural to oratory.

If, after a time, efforts at persuasion be recognised to be of no avail, talking will necessarily give way to other methods. The first of these, with the majority of a crowd like the one of which we are thinking, will be to take the measure of those before them. For a brief moment, at least, they will merely gaze, intent to see exactly what it is that they have to face. That which at this time absorbs the attention, if it be represented at all, evidently requires a picture. A photographer, did he happen to be a witness of the scene, who, so long as he was sufficiently excited to argue, would not think of the mere appearance of those surrounding him, might, at this stage, in case his interest did not carry him on to the next stage, bring out his camera. We have here, then, conditions which are at the basis of representation according to the modes of painting and sculpture.

After this momentary facing of the situation, however, any one not willing to accept conditions as they present

themselves to view will evidently be prompted to take measures for changing them. If surrounded by foes exciting his physical nature, he will plan to fight them; if by friends, too, whom he desires to lead to battle, he will do what he can toward marshalling them into companies and battalions, thus changing their confusion to order. This mood, in the effect that it has in rearranging the appearances of nature, is evidently analogous to that which finds expression in the modes of representation exemplified partly in sculpture and wholly in architecture. In the latter art, the mind no longer accepts, as in painting, the appearances of nature as they are; it asserts its supremacy over the influences from without, and, while accepting certain details, attempts to change the conditions under which they are presented. The moment, however, that this supremacy becomes actual, the moment that a man becomes really free from the influences from without, the possibility of representing thoughts and emotions through representing outward effects ceases. The occupation of the artist is gone as completely as that of a soldier who has no foes. The influence that first prompted to expression in the forms allied to music has exhausted itself. We have traced it to a point beyond which it can be traced no farther.

Let us try now to go deeper into our subject. Let us try to ascertain more definitely precisely what conditions of natural influence and what states of consciousness are represented in each art. In order to do this, let us use another illustration. At first it may seem fanciful. Later on good reasons for using it will be given. The illustration is suggested by words that we apply to ordinary experiences, whose extraordinary developments alone lead to representative art. Words are like wrinkles, external

marks of internal moods. Sometimes by tracing back the derivation of a word, one may find out the mental condition that originated it.

To apply this principle in the present instance. When we say that the mind is *moved* or *affected* by an *influence* or *motive* from without, so far as we convey any meaning it is this: That the mind has certain contents, and that these, which otherwise would be stationary, and therefore unnoticed by consciousness, are set in motion when something from without, by an *influx* or *influence*, *flows* into it. In order to comprehend fully the comparison thus indicated by the words that we use, let us do what will enable us in imagination to magnify its factors. Let us represent the contents of the mind by the floating but, except for outside influence, stationary ice in some bay or inlet, and at the same time represent that which flows into the mind by the waves and currents entering this bay or inlet from an ocean. Let us observe what is the natural order of development of the relations sustained between the waters thus forced inward and the ice. Is it not something like this?

At the point nearest the ocean, the waves sweeping over the ice break off and bear up and down small portions of it, but with such force that the ice forms but an insignificant, perhaps an indistinguishable, part of the effect of the waves as a whole. This is the condition corresponding to that of music. A little farther inward, the floating ice covers the waves. We see mainly the ice, but it is moving, and its movement indicates that of the water under it. This is the condition found in poetry. Still farther inward, the portions of broken ice, crowded together by the force of the waves, begin to offer manifest resistance. Up to this point one could hardly dis-

tinguish from a distance the ice from the waves. Here it becomes almost impossible to confound the two; for at one place the weight on the surface is seen crushing down the surf, and at another the surf is seen breaking through and above the surface. This is the state of things in painting and sculpture. Last of all, at places nearest the shore, the force of the waves seems to be crushed out completely, yet the effects produced by them are abundantly apparent in the great moveless heaps of ice resting against the water-line. This represents the condition in architecture.

Let us now notice whether this order of development in the relations existing between the influence from without and the possessions within the mind has any basis in facts; first in physical facts, afterwards in mental facts. To begin with, are there any physical facts which justify us in comparing the action of outer effects upon the mind to that of waves upon something stationary; and if so, is there any reason why these waves, at their greatest, can be represented in music, and, at their least, in architecture? To both these questions we can give an affirmative answer. Physicists tell us that the acoustic nerve floats in a fluid back of the drum of the ear; also that the optic nerve rests against a corresponding humor back of the crystalline lens of the eye. They tell us that whenever sounds or sights reach intelligence, they are conveyed to it because, as a fact, these nerves are physically shaken through the influence of waves from without which strike the ear drum or the crystalline lens. So much for the first question; now for the second. Physicists tell us also that the waves vibrating to shake the acoustic nerve are so large that, at the least, about sixteen of them, and, at the most, about forty thousand, can move in a second

of time; but that, on the other hand, the waves shaking the retina are so minute that, at the least, about four hundred and eighty-three trillions, and, at the most, seven hundred and twenty-seven trillions, can move in a second. These assertions indicate that the sensation of being most shaken, shaken by the largest waves, or when the influence has most force, can be represented or communicated better—and any nervous mother with half a dozen small boys will confirm the statement from her own experience—through sound than through sight.

Whether we consider quantity or quality, there is more of sound represented in music than in poetry. By consequence, of the two arts, the former represents better the first effect of a motive *per se; i. e.*, the most powerful, the least exhausted effect of any influence from without, considered merely as an influence. Oratory appeals to sight as well as to hearing. For this reason it represents a later effect than poetry. Of those arts which, because they appeal to sight alone, represent effects in sight still later than oratory, painting evidently comes first. It uses more brilliancy and variety of colour, necessitating larger vibrations—the largest of all, for instance, producing extreme red—and also greater dependence upon everything conditioned directly by influence of this kind than is the case with either sculpture or architecture.

There are other physical facts which confirm what has been said. Consider the degrees of force accompanying the influences which affect respectively the ear and the eye. Thunder, which one hears, can make the foundations of one's house shake literally. Nothing similar can be affirmed of effects that one can only see. The Greeks, whose myths with reference to other matters were so

significant, represented their conceptions of the influence of music in the story of Orpheus and Amphion, who, with their harps, drew around them not only wild beasts, but trees and stones, causing all to dance to their melodies, and finally bringing the stones together to form the walls of a mighty city. Nor are these conceptions of the physical influence of sound expressed in myths alone. Both ancients and moderns have used music medicinally. Plato, Plutarch, and Cicero all speak of its supposed remedial powers. In modern times, eminent physicians in England, France, and Germany have insisted upon its efficacy in cases not only of insanity, but of hemorrhage, fever, and of almost all kinds of spasmodic troubles. In our own country it is used more or less in insane asylums.

However, the question of the medicinal properties of sound or of music is not the one with which we are here concerned. Some may doubt them; but even if so, none can doubt that whatever in such circumstances may be affirmed of a man's physical nature, it is a fact that at least his mental nature is affected. Effects in the mind, in the degree in which they appeal to consciousness in the form of mere movement, are termed sensations or emotions. The first experience of a man, when strongly influenced from without, makes him mainly, though not wholly, unless he have wholly lost his mind, conscious of these emotions. His first and always an instinctive expression simultaneous with such an experience is an inarticulate cry. If we startle a person—come upon him suddenly, for instance, in the dark—in nine cases out of ten we hear this cry, its intensity being in direct proportion to his lack of control over those powers of his mind which give rise to definiteness in thought. The child is more likely to scream than the man.

These facts suggest, at once, their reason. One utters inarticulate sounds, because he has not had time enough, either absolutely, or relatively to the intensity of his feelings, to collect and formulate them into words; often, indeed, not even into thoughts that are definite to himself. If they were so, he would use the only form capable of representing definite thought, which is language; in other words, he would express himself in the form which, when artistically developed, leads to poetry. In this form, when the sound-waves break against the nerves of the outward senses, the mind that feels their influence is in a condition in which it is conscious of being filled, not with indefinite and undefined sensations, as in music, but with definite sentiments, many of which seem virtually identical with words which, by way of comparison or association, clearly define them. Suppose that a man be prompted to enlist. If his mind be stored with facts of history, he may think about Wellington at Waterloo, or Grant at Vicksburg. If he be accustomed to views of external nature, he may think about thunder and lightning felling the forests, or hail and flood sweeping through mountain passes. He cries out concerning a fortress and its defenders, "We must storm it; we must give them thunder and lightning!" He does this because storms, thunder, and lightning are definite conceptions which are already in his mind. They make up the substance of which he is conscious, when he uses his mind, or thinks. If ice fill a bay completely, an observer can know that the water under the ice is moving, only as he sees the ice moving. This is the relationship between that with which the mind is filled and the influence from without which we find in poetry.

This relationship, and the difference between it and

that which exists in music, is clearly suggested by the fact that the general result is represented in poetry through the use of articulated words, and in music through the use of inarticulated tones. Words represent conceptions which are sufficiently intelligible to be clearly defined. Tones represent conceptional tendencies, which are not always sufficiently intelligible to be clearly defined. The consequent difference between the effects of the two arts is this: Both influence the imagination, and, while doing so, conjure pictures which pass in review before it; but while poetry indicates definitely what these pictures shall be, music leaves the mind of the listener free to determine this, the same chords inclining one man, perhaps, to think of his business, and another of his recreation; one of a storm at sea, and another of a battle-field.

Now notice a further fact with reference to this difference,—a fact which will serve to emphasise, too, the importance of the general principle brought out in this chapter, namely, the necessity of clearly distinguishing the phase of representation appropriate for one art from that appropriate for another. The fact is this,—that words make thought definite because they appeal to the imagination as is done through the sense not only of hearing but also of sight; and this, not only because they can be printed as well as spoken, but because, as a rule, they refer to objects, as in the cases of *hut*, *farm*, *road*, and *horse*; or to actions, as in the cases of *come*, *go*, *stop*, and *hurry*; or to other conditions, as in the cases of *near*, *far*, *with*, and *by*, that can be seen, and that are seen by imagination whenever the words are used. Musical tones, on the contrary, appeal to imagination almost exclusively as is done through the sense of hearing

irrespective of sight. This is a difference which is radical, and extremely important. Poetry of the highest order, as we read it, calls attention to visible objects. Through doing so the lines transport us into a realm of imagination, and this not of our own making, as in music, but of the poet's making. So far as he fails to lift us into this realm, and to keep us in it, his poetry fails of one of its most important possibilities. Notice in the following how clean-cut and concrete every figure is, how it stands out in relief, rising visually before the mind, the moment that the words are heard:

Like one that stands upon a promontory,
And spies a far-off shore where he would tread,
Wishing his foot were equal with his eye.
3 Henry VI., iii., 2: Shakespeare.

He has strangled
His language in his tears.
Henry VIII., v., 1: Idem.

Her feet beneath her petticoat,
Like little mice, stole in and out
As if they feared the light.
A Ballad upon a Wedding: Sir John Suckling.

And the night shall be filled with music,
And the cares that infest the day
Shall fold their tents like the Arabs,
And as silently steal away.
The Day is Done: Longfellow.

This last stanza is characteristic of Longfellow. Does the visual effect of the style give us one reason for his wide popularity? Observe now that this clean-cut, concrete visualisation can be conjured in the imagination

even by a description of something which, in itself, is not clean-cut or concrete:

> Then saw they how there hove a dusky barge,
> Dark as a funeral scarf from stem to stern,
> Beneath them; and descending, they were ware
> That all the decks were dense with stately forms,
> Black-stoled, black-hooded, like a dream,—by these
> Three Queens with crowns of gold.
>
> *Mort d'Arthur: Tennyson.*

With these quotations in mind, let us examine the following. As we read them, are we not far more conscious of certain audible sensations of great delicacy and sweetness than of any definite and distinct pictures rising, one after the other, into consciousness; and, just in the degree in which this is true, is it not a fact that we fail to be lifted out of our actual visible surroundings into that realm of the imagination, no less visible, into which it seems the peculiar function of poetry of the highest order to transport one?

> Round thee blow, self-pleachèd deep,
> Bramble roses, faint and pale,
> And long purples of the dale.
> Let them rave.
> These in every shower creep
> Through the green that folds thy grave.
> Let them rave.
>
> *A Dirge: Tennyson.*

> Praise him, O storm and summer-shore and wave,
> O skies and every grave;
> O weeping hopes, O memories beyond tears,
> O many and murmuring years,
> O sounds far off in time and visions far
> O sorrow with thy star;

And joy with all thy beacons; ye that mourn,
And ye whose light is borne;
O fallen faces, and O souls arisen,
Praise him from tomb and prison!

A Song of Italy: Swinburne.

In much modern poetry, these musical effects are either, as in these passages, entirely substituted for visual effects, or are allowed to overbalance the visual to such an extent as to obscure them. This is one reason why poetry is so little read, and has so little influence, in our own times. Notice the kind of representation that, in Byron's day, helped to make almost everybody read what he wrote:

'T is midnight. On the mountains brown
The cold round moon shines deeply down;
Blue roll the waters, blue the sky
Spreads like an ocean hung on high,
Bespangled with those isles of light,
So wildly, spiritually bright;
Who ever gazed upon them shining,
And turned to earth without repining?

The Siege of Corinth: Byron.

CHAPTER X.

THE DIFFERENT ARTS AS REPRESENTING DIFFERENT PHASES OF MENTAL CONCEPTION—*Continued.*

Persuasion and Oratory—The Conditions of Mind Represented in the Arts of Sight—In Landscape Gardening—In Painting—The Different Conditions Expressed in Poetry and in Painting—Bearings of this Fact upon Poetry—Theory of Lessing—Objection to the Theory—Importance of the Theory Illustrated in Poetry—Other Examples—Applied to Methods of Poetic Description—By Talfourd—Crabbe—Wordsworth—Tennyson—Some Subjects Unfit for Paintings—Others—Allegorical Paintings—Same Subjects Possible to Poetry and Painting, if Treated Differently—Painting can Suggest More Movement than Sculpture—And, on Account of Colour, More Variety in the Number and Sizes of Objects; also More Minuteness and Triviality—Architecture as Originated—As Influenced by Methods of Painting and of Sculpture—Deterioration on Account of This—Recapitulation with Reference to Forms of Representation in Arts of Sight—Correspondences between Architecture and Music—Conclusion.

LET us go back now to the illustration of the man in the crowd. After words have given expression to his sentiments, and other men have begun to express theirs, he is apt to discover that in some regards they differ from him. At first, however, this feeling is overbalanced by another. The man imagines that if he can only represent clearly and forcibly his own notions, he will be able to persuade others to agree with him. This will be recognised to be the motive prompting to oratory, —an art which can appropriately be mentioned here, because it forms a connecting link between poetry and

painting. Oratory itself, however, is not strictly an æsthetic art, because mainly directed toward a useful and practical end. Indeed, it usually fails in case its representative features be too strongly emphasised, *i. e.*, in case its delivery be too elocutionary, its rhetoric too florid, or its action too theatric.

As indicated in the illustration used on page 144, after a man has found that persuasion is of little or no avail, he is apt to stand, for a moment, gazing at those whom he cannot influence in this way. This condition of mind, if it be represented at all, necessitates some sort of a picture. Let us look at the facts here carefully. To check oneself implies that one is no longer moved as strongly as he usually is in the moods represented in music, poetry, and oratory. It implies that the ideas are related to the influence from without in the same way as the ice to the water, when, in the illustration given, the ice begins to manifest resistance. The ideas, no longer now in the condition in which one uses poetic language,—no longer swept along by the current of influence in such a way that the movement of the current may be perceived in their movements,—are recognised in consciousness as factors which resist the influence from without; therefore as factors which, while they compare with it, may be contrasted with it.

The art representing the earliest phase assumed by the consciousness of an external world as contrasted with one's own ideas is the partly ideal art of landscape gardening. In a logical order of sequence this art stands next to poetry and oratory. These are developed from a man's power over himself, over his own voice and limbs. The next mode of exerting power, logically considered, is to touch something outside of self, and, in

doing this, to begin by handling nature in a crude form, as it is used in landscape gardening. Only later can one come to the canvas, pigments, marbles, and woods used in the plastic arts. It is hardly necessary to point out that, with all the fidelity to nature that must be manifested in successful gardening, every feature revealing that it is an art, is derived from a contrast, in spite of very much also that manifests comparison, between a field as presented in nature and a park as planned, arranged, and cultivated.

An analogous fact becomes more apparent as we pass on to painting. "A higher and a lower style," says Sir Joshua Reynolds in his thirteenth "Discourse on Painting," "take their rank and degree in proportion as the artist departs more or less from common nature." Evidently, according to this view, the difference in painting between high and ordinary art is revealed in the contrast between the picture and nature. In passing through the mediumship of the man, that which came from nature has been changed. Each change has been wrought by an idea, and all the changes together indicate a contrast between what nature really is and the artist's idea of what it might be. Here, at the very beginning of the mental tendency that is represented in painting, we have a beginning of that principle of contrast that enters so largely into the painter's success when using, in a merely technical way, the elements of light and shade and colour. (See Chapter XVIII.) While poetry, as in the picturesque language described on pages 115 to 117, uses comparison with only occasional contrast, painting uses both in very nearly like proportions.

This more extensive use in painting of contrast might be considered of merely theoretic importance, were it not

for that which necessarily accompanies it. This is the fact that the natural appearances treated in painting are, as a rule, perceived outside the mind, whereas those referred to in poetry have been already stored inside the mind. Painters and sculptors reproduce scenes or figures perceived in the external world, and they do this through using an external medium like canvas or marble. Poets recall what they have heard of events or of men, like a battle or a Wellington, and reproduce this through using words. Words contain not what is external to the mind, but what is in it. The bearing of these facts is extremely important when considered in relation to the conceptions appropriate for treatment in the different arts.

As applied to poetry, the facts seem to rule out of its domain any descriptive details other than those of such prominence that a man observing them might reasonably be supposed to have been able to retain them in memory, —other than details—to state it differently,—which have been stored in the mind, and are brought to consciousness because, apparently, the most important factors entering into the general mental effect. In accordance with this principle, it was shown in Chapter XXII. of the author's "Poetry as a Representative Art" that the descriptions of Homer are all mental, fragmentary, specific, and typical, *e. g.*:

> And first, Æneas, with *defiant mien*
> And *nodding casque*, stood forth. He held *his shield*
> *Before* him, which he *wielded right and left*,
> And *shook* his brazen *spear*.
>
> *Iliad, 20: Bryant's Trans.*
>
> He dwelt
> Within a mansion filled with wealth; *broad fields*

Fertile in corn were his, and *many rows*
Of trees and vines around him.

Iliad, 14: Idem.

He dropped the reins,
Gleaming with ivory as they trailed in dust.
Antilochus leaped forward, smiting him
Upon the temples with his sword. He fell
Gasping amidst the sand, *his head immersed*
Up to his shoulders—for the sand was deep.

Iliad, 5: Idem.

The monarch stripped the slain, and, leaving them
With their white bosoms bare, went on to slay.

Iliad, 11: Idem.

Connected with this fundamental difference between that which may appropriately be represented in poetry and in painting, is another. "Objects which succeed one another, or whose parts succeed one another in time," says Lessing, in Sec. 16 of "The Laocoön," translated by Frothingham, "are actions. Consequently actions are the peculiar subjects of poetry. . . . Objects which exist side by side, or whose parts so exist, are called bodies. Consequently, bodies with their visible properties are the peculiar subjects of painting. . . ." And again (Sec. 18), "To try to present a complete picture to the reader by enumerating in succession several parts or things, which in nature the eye necessarily takes in at a glance, is an encroachment of the poet on the domain of the painter. . . . To bring together into one and the same picture two points of time necessarily remote, as Mazzuoli does in the 'Rape of the Sabine Women,' and the reconciliation effected by them between their husbands and relations, is an encroachment of the painter on the domain of the poet."

An objection to the theory of Lessing, thus stated, is that a literal application of it seems to necessitate the

artist's invariably representing in a story anything that is heard in time, as well as invariably representing in a picture anything that is seen in space, or that is received by him in the form of a picture. But, as was shown in the preceding chapter, exactly the same experience, at different stages of the development of its influence upon the mind, can be appropriately represented through the medium of a different art. Therefore, when one comes to apply the principle brought out by Lessing, he must be careful to bear in mind that the question to be asked is not whether the conception to be expressed was derived from a form appearing in time or in space, but whether, as it has affected the mind, it can be represented to others in time or in space.

With this interpretation of the theory, no reasonable objection can be urged against it. On the contrary, very slight examination, either of poetry or of painting, will reveal the great importance of regarding the principle to which it gives expression. For instance, in speaking of the plan of his "Excursion," Wordsworth, in several places, tells us that his conception of it was that of a cathedral to which his minor poems should stand related like chapels opening from the aisles. In other words, he acknowledges that a method of thought or expression not natural to poetry, but to another art, an art, too, necessitating a body filling space, was present to his mind when considering the general form of his poem. So far as this method had influence, his motive, therefore, was that not of the poet but of the architect. A poem modelled after a cathedral! One might as well talk of a picture modelled after a symphony, or a statue after a running stream.

Analogous criticisms might be made with reference to

many other of our English poems. Cowper's "Task," and Thomson's "Seasons," are modelled apparently upon the methods of a man who is preparing a set of village photographs or a county guide-book. As a result, notwithstanding many admirable passages, who does not feel that, considered as wholes, the poems are inartistic? Or, as contrasted with them, who does not feel that works like Scott's "Marmion," or Byron's "Corsair," however deficient in passages, nevertheless, considered as wholes, are artistic? But what is the essential difference between the poetry represented by these two classes of products? Not merely that the former are didactic and naturalistic, and the latter narrative. The chief difference lies in the fact that while, as a rule, poets like Scott and Byron portray actions in such ways that the successive events described keep pace with the movements of thought, even if they do not lead it onward, the other poets portray actions, if at all, as if stopping often, with pencil in hand, to sketch in detail, or explain and elaborate the scenes observed.

To recognise this effect of lack of movement, notice the passage from the "Excursion" in which a cathedral is described:

> Not raised in nice proportions was the Pile,
> But large and massy, for duration built;
> With pillars crowded and the roof upheld
> By naked rafters intricately crossed
> Like leafless underboughs in some thick wood
> All withered by the depth of shade above.
> Admonitory texts inscribed the walls,
> Each in its ornamental scroll inclosed;
> Each also crowned with wingèd heads,—a pair
> Of rudely painted cherubim. The floor
> Of nave and aisle, in unpretending guise,

Was occupied by oaken benches ranged
In seemly rows ; the chancel only showed
Some vain distinctions, marks of earthly state.
Excursion, v. : Wordsworth.

Here is another passage written with the motive of the painter. The readers of it instinctively think of a plot of ground, *i. e.*, of a mindless thing standing between their thought and the thought of the writer. They are not brought into immediate communication with the living mind from which the words come, and therefore their minds are not addressed directly by this mind, as, through the use of words, they should be addressed:

From the gate
Of this home-featured inn, which nestling cleaves
To its own shelf among the downs, begirt
With trees which lift no branches to defy
The fury of the storm . . .
the heart-soothed guest
Views a furze-dotted common, on each side
Wreathed into waving eminences, clothed
Above the furze with scanty green, in front
Indented sharply to admit the sea
Spread thence in softest hue—to which a gorge
Sinking within the valley's deepening green
Invites by grassy path.
Alum Bay : Thomas Noon Talfourd.

There is, of course, a certain interest, though sometimes not above that which is merely topographic or botanic, awakened by minute descriptions of fields and flowers, such as a painter on the spot would be able to give while carefully scrutinising these in order to depict them. But in descriptions of this kind the external world is not subordinated to the thought in the same way in which a scene of nature is, when recalled by

memory. As contrasted with the last quotation, the reader will recognise in the following a far more immediate communication of thought and feeling between mind and mind, while, at the same time, nothing is described which in a picture could be any more than suggestively represented:

> Home went the lovers through that busy place
> By Loddon Hall, the country's pride and grace;
> By the rich meadows where the oxen fed,
> Through the green vale that formed the river's bed,
> And by unnumbered cottages and farms
> That have for musing minds unnumbered charms:
> And how affected by the view of these
> Was now Orlando?—did they pain or please?
> Nor pain nor pleasure could they yield—and why?
> The mind was filled, was happy, and the eye
> Roved over fleeting views that but appeared to die.
>
> *The Lover's Journey: Geo. Crabbe.*

This method of description, however, manifests negative rather than positive excellence. There are other passages in which the external scene is not, as in this last case, subordinated in the sense of having certain of its details let alone, but in the sense of having everything important to the effect positively introduced. As we read the following, is it not true that we are constantly being made conscious of thinking more of what the poet thought than of what he saw; and this because what he saw has been used, not for its own sake, but to give form to what he thought? As a result, is it not true that we find certain images rising up in imagination and suggestively taking form, just as previously they may be supposed to have taken form in the mind of the author, giving us thus an illustration of what an artist's creative

imagination can do in the way of stimulating creative imagination on the part of others?

At my feet
Rested a silent sea of hoary mist.
A hundred hills their dusky backs upheaved
All over that still ocean; and beyond,
Far, far beyond, the solid vapours stretched
In headlands, tongues, and promontory shapes,
Into the main Atlantic that appeared
To dwindle and give up his majesty,
Usurped upon far as the sight could reach.

Prelude, xiv: Wordsworth.

Notice again, in the following, how little there is which a painter could reproduce with accuracy; and this because the motive to expression, although influenced by certain scenes to which allusion is made, is not that of the painter but that of the poet. The movement of thought is the main object of representation. We hear of a court and a sunset; but we scarcely do so before other things are so crowded upon attention as to obviate at once any suggestion of a desire to delineate outlines as they appear in space.

There rose
A hubbub in the court of half the maids
Gathered together; from the illumined hall,
Long lanes of splendour slanted o'er the press
Of snowy shoulders, thick as herded ewes,
And rainbow robes and gems and gem-like eyes,
And gold and golden heads; they to and fro
Fluctuated, as flowers in storm, some red, some pale,
All open-mouthed, all gazing to the light,
Some crying there was an army in the land,
And some, that men were in the very walls,
And some, they cared not, till a clamour grew

> As of a new-world Babel, woman-built,
> And worse-confounded; high above them stood
> The placid marble Muses looking peace.
>
> *The Princess: Tennyson.*

As contrasted with poetry, painting and sculpture represent not that which is inside the mind, and may be recalled in the order of time, but that which is outside the mind, and may be perceived in the arrangements of space. For this reason, to quote from the second of Opie's "Lectures on Design," "Many interesting passages in history and poetry are incapable of affording more than a bald and insipid representation on canvas. Of this description is the incident in the 'Iliad,' where one of Priam's younger sons, fallen before the superior force of Achilles, solicits his life on account of his youth. 'Wretch!' exclaims the furious hero, 'dost thou complain of dying, when thou knowest that Achilles must shortly die?'" Such incidents as these, if made subjects of pictures, cannot be understood without an added verbal or written description, which is the same as to say that, in any merely pictorial product, they cannot be represented at all. This fact is at the basis of the adverse criticism often passed upon the endeavour, in a painting, to "tell a story." It is said that such paintings are "literary." The criticism is clearly justified so far only as a painting does not tell its *own* story, but requires, as it were, "literary" aid in order to make plain its meaning. No such aid is required in the cases of paintings like those described on pages 119 to 123.

Such aid is always required, however, when events taking place at different times cannot be adequately suggested by what is taking place at one time; but must all of them be depicted, or else not indicated. Few of us

have not seen old engravings in which something like this has been attempted, engravings intended to show at a single glance—although it requires several glances to discover what the intention really is—the whole story of a "Pilgrim's Progress," or of a "Drunkard's Progress." However interesting, curious, or instructive these engravings may be, we all feel that they sustain much the same relation to painting of a high order as minutely descriptive verses do to poetry of a high order. Those who have had their attention called to the original or photographs of the "Adoration of the Magi," by Bernardino Luini, will recall that besides the group of the Magi in the foreground, there is furnished in the background, a picture of the journey of these same Magi to the stable. We see them, with a line of heavily laden horses and camels, descending a zigzag pathway which reminds one of the representation of a mountain-pass in a theatre.

It is apparent that in such paintings an attempt is made to depict in a single view events that could not conceivably be actually perceived thus. The pictures, therefore, are not representative of the appearances of nature. We must be careful, however, not to carry this principle, thus briefly stated, too far. In the picture by Delaroche in the hall for the distribution of prizes in the School of Fine Arts in Paris, the figure of Fame sits in the centre, crowning with laurel seventy figures, the great artists of every land and age, who are represented as standing or seated before her. In the "School of Athens," by Raphael (Fig. 22, page 167), we see, in addition to certain great men of different periods of ancient Greece, Raphael himself and his master Perugino. These are what are termed allegorical paintings. There

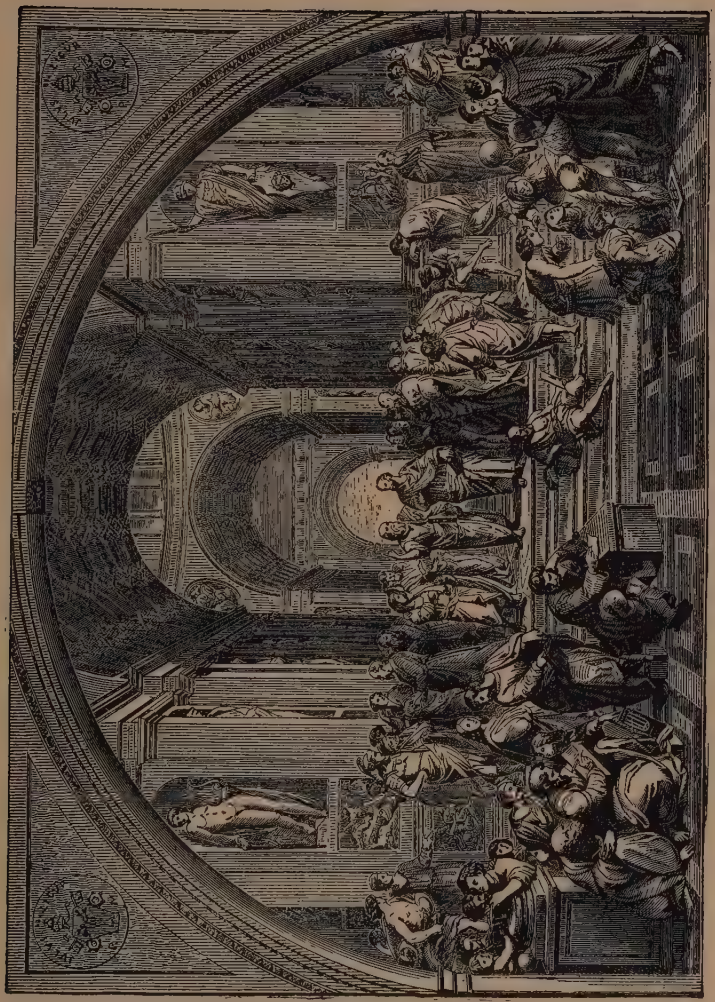


FIG. 22—SCHOOL OF ATHENS.—RAPHAEL.
See pages 166, 259, 284, 285, 316.

are some who hold that all kinds of allegorical paintings usually violate the principle of Lessing because they attempt to depict as appearing at one time a collection of persons or a series of events which in real life could be perceived only in succession or at different times. Others, however, not without reason, defend such appearances in a single picture upon the ground that, when the mind recalls "Artistic Fame" or "Athens" it thinks of the characters represented not as existing in different places or periods, but in that one conception of its own imagination. Why, it is asked, should not the representation of the imagination reveal them all as present together? However this question be answered, one would be untrue to all the facts of the case, did he not acknowledge a liability, at least, to confusion in such paintings. Not only so, but it seems to be a fact, too, that those portions of an allegoric painting which are favourites are less so on account of their connection with the whole picture of which they form a part; than because they can be separated from it, as is shown in so many copies and photographs that are made of the group of the "Young Pilgrims" taken from Kaulbach's "Destruction of Jerusalem."

From what has been said, it need not be inferred that painters can never draw their subjects from poetry, or poets from painting. It need merely be inferred that there should be a difference in the ways in which the two arts treat the same subject. For instance, in Cole's series of pictures entitled "The Voyage of Life," and in Hogarth's series entitled "The Rake's Progress," each of the separate pictures represents only a single situation. Yet all, placed side by side, accomplish, without any violation of the principle that we have been discussing, the

same purpose that would be reached were the successive details unfolded in a single product.

Just as poetry, though it should not directly represent space, as in the passage quoted on page 162, yet may indirectly suggest it, as in the passages on pages 163 and 164, so painting and sculpture may suggest, though they should not directly represent, time. (See page 317.) Painting, however, is better fitted to suggest time than is sculpture. This is so because painting, as a rule, can represent a larger space than sculpture,—a space filled with more objects and figures and indicating, therefore, more interchange between them of cause and effect, which latter seem to involve movement. The effects of statuary are produced through the use of bulk, *i. e.*, of outlines, including those of length, breadth, and thickness,—outlines that one can sometimes walk around and observe from every side. For this reason sculpture is at its best in the statue, or, so far as in the relief, in that in which the figures project to the greatest degree possible. This condition is represented in significance by giving to each figure, even of a group, an individual rather than a collective, associative, or communicative interest. The figures depicted in the frieze surrounding the Parthenon, whether in the procession or not, represent very little interchange, between one figure and another, of thought or feeling. In this regard they present an entirely different appearance from the figures in such paintings as Rubens's "Descent from the Cross" (Fig. 1, frontispiece), or Raphael's "Death of Ananias" (Fig. 37, page 233). In the sculptured group of "Niobe and Her Children" there is no interchange of sympathy; nevertheless, because each figure, in its own way, gives expression to the same general emotion of grief, its position is interpretive of the

meaning of all the figures. Or take a more marked example. The German scholar, Ludwig Preller, says that the "Apollo Belvedere" (Fig. 23, page 170), or the statue after which this is modelled, probably stood originally on the apex of the pediment of a temple at Delphi, with the statue termed "Diana of the Louvre" on one side of it, and the statue termed "Athena of the Capital" on the other side. This would be in accordance with the answer said to have been given, when the Gauls approached Delphi, to the question of the people whether the treasures of the temple should be removed. The answer was, "I myself [meaning Apollo] and the White Maidens [meaning Athena and Diana] will take care of that." Now if we can recall the appearance of these statues as thus situated, we shall be able to comprehend how their postures, full of movement as each is, should mutually add to one another's interest, and at the same time not interfere at all with the statuesque character of the effect

FIG. 23—THE APOLLO BELVEDERE.
See pages 170, 171, 242, 243, 290.

of each. It is noteworthy, too, how much more this individual interest attaching to the figures is apt to be awakened in sculpture than in painting. We seldom see in a picture a figure that stands out from all surrounding figures, asserting such claims to pre-eminent and exclusive attention as is common in groups of statuary. Continuing this line of thought, we shall soon recall how superlatively we have enjoyed certain statues, for the very reason, apparently, that they were placed so that one could view them apart from anything else,—statues that stand in rows, or in alcoves by themselves, as is the case at Rome with the "Apollo Belvedere" (Fig. 23, page 170) and the "Venus of the Capital," and at Frankfort-on-the-Main with the "Ariadne." These facts may aid us in forming a conception of what is meant by saying that the statue's significance is less dependent than is that of a painting upon the suggestion of cause and effect as operating in time.

But there is yet a more important limitation to the subject-matter in sculpture. This is owing to its slight use of colour. The difference between it and painting occasioned by this fact may be brought out by recalling the difference, which all recognise, between the meaning of the terms *picturesque* and *statuesque*. The *picturesque*, as it will be defined on page 181, involves a conception of much and minute variety. And this is just what painting involves. The colour that is used in it, and not in sculpture, is never well applied unless it imitates the influences of light and shade in nature to such a degree as to cause slight differences at almost every perceptible point. Besides this, colour enables the artist to separate, one from another, and thus to represent clearly, a very large number of small details most of which would be indistinguishable

if an attempt were made to indicate them in sculpture. In this latter art, landscape is well-nigh impossible, and so is any extensive grouping of figures. Moreover, the difficulty of the work, the permanence of the material, and the fact that the shape, when completed, is to be the sole object of attention, all combine to make especially inappropriate the representing in sculpture of a trivial subject. This ought to be dignified, or, in lieu of that, at least a subject treated in a dignified way. For this reason, notice that, in a sense not true of painting, it is appropriate that the figure delineated in a statue should be represented in a form greatly exaggerated. Large pictures, like those of West, sometimes offend us by their very size; and it is not easy to conceive of an attractive picture with figures of heroic proportions. But the "Moses" of Angelo or the "Bavaria" in Munich does not offend us. On the contrary, very small pictures, as in miniatures, are often extremely pleasing and valuable. But most of us cannot avoid feeling, when we see the bronze doors of the Florence Baptistry, that the small size of the figures makes the work expended upon them hardly worth while, because such subjects could have been represented so much more satisfactorily in pictures.

Let us now notice the importance of separating clearly the conditions naturally represented in painting and sculpture from those naturally represented in architecture. When our race, with no models to direct them, began to build houses and temples, the external forms of each were determined by the design for which it was constructed,—a design suggested, as reflection will show that it must have been, by the modes of attaining in nature ends like those of support, protection, and shelter. This being the case, the desire to attain these ends was evident to every

one who saw the building; in other words, the building's effects were artistic in the sense of being genuinely representative of the design of the builder.

In process of time, however, after many such structures had been erected, and some of them had come to be especially admired for their appearance, a class of artists arose more intent to imitate this appearance than the methods in accordance with which the older architects had designed the buildings and caused them to appear as they did. As a consequence, there came to be no apparent connection between the outward form of a building and that for which it was designed;—in other words, architecture ceased to be representative, in the sense in which the word has been used in this essay. But besides this, after the arts of painting and sculpture had been developed, architects began to manifest a tendency to imitate the methods, if not the appearances, employed in these other arts. In accounting for the inferiority of the architecture of the Renaissance, Fergusson, in the introduction to his "History of Modern Architecture," says: "Most of those who first practised it, at the time the revolution took place, were either amateurs, sculptors, or painters. . . . All painters can make architectural designs for the backgrounds of their pictures. . . . But if any one supposes that such a design will make a permanently satisfactory building, he knows little of the demands of true art."

In this passage, Fergusson ascribes inferiority to modern architecture as contrasted with mediæval,—though he does not use this phraseology,—because of the prevailing tendency in this art to derive its methods from painting and sculpture rather than from the natural promptings and requirements of architecture itself. One element of

successful architecture undoubtedly is the mere external appearance of a building. And yet, if this alone be regarded, is it not evident that the building will be the embodiment of a motive less legitimate distinctively to architecture than to painting, or to sculpture? And is it not because of this confusion of motives that we find in our modern buildings—in their cornices, roofs, windows, and walls—so much that is false—in other words, so much that is merely on the outside, put there to look well, not to fulfil or to give embodiment to any such significance as it is the peculiar function of architecture to represent? This is not to say that, in this art, the external form should violate the laws of proportion or harmony; but it is to say that these latter should be made to accord with the general design, to be manifested, if possible, in outlines so disposed as to indicate this design, and not, as is true in too many cases, to conceal it.

To recapitulate now all that has been said with reference to the arts of sight, the works of the landscape gardener resemble nature in almost every feature; those of the painter, in colour and outline; those of the sculptor, in outline only. In architecture, the product resembles nature not even in outline, except as it may be broken up and arranged anew. The painter and the sculptor observe nature for the purpose of copying its forms; the architect, for the purpose of constructing new and different forms for which, as wholes, nature furnishes no copy. In his work that contrast between the product and nature which is mentioned on page 157 is often so complete that the one no longer, as in the case of painting, necessarily suggests the other. If the forms used by the architect be beautiful, it is less because—except, of course, when used in ornamentation—they are the same in detail as those found

in nature, than because they are the same in principle, because they are controlled by the same general laws that underlie all appearances and combinations of them that are naturally pleasing.

In this regard, in its lack of the imitative element, and therefore in having forms that recall nature more by way of association than of comparison, architecture resembles music,—"frozen music" as Madame de Staël said. It is important to observe, however, that the reason of this resemblance between the two arts is owing not to a similarity in the factors entering into the result, but to a similar lack of balance in the way in which they are blended. In music the consciousness of the moving or emotional influence is so strong that, as contrasted with it, the mind is hardly aware of its own ideas. In architecture, on the contrary, the consciousness of this influence is so slight that it is of this that the mind is hardly aware. That which flows in the one art may be said to be congealed in the other, and the artistic representation of each state of consciousness evinces this. The medium of music moves; that of architecture stands. Because of the lack of balance in both arts between the consciousness of the influence that moves and of the ideas that are moved, the connection between influence and ideas is not, in either art, always apparent. Many, in fact, fancy that music represents no ideas, and that architecture represents nothing except ideas. But the truth is that, without both arts, the representations of the different phases of consciousness, developing, one after another, as has been shown, would be incomplete. The two arts are expressive respectively of the two extremes of this,—of those misty border-lands of apprehension where the results of that which influences consciousness appear and where they disappear.

Taken together, all the arts that have been mentioned represent every possible effect produced in the mind as emotion, intellect, and will successively receive and modify the influence that the audible or visible forms of nature exert upon them. The expressional series is complete all the way from where, in music, we heed the roaring of the waves of influence as they dash upon apprehension, to where, in architecture, we perceive the spray that congeals in fairy shapes above the place where their force has been spent.

CHAPTER XI.

DIFFERENCES IN THE SAME ART AS REPRESENTING DIFFERENT DEGREES OF CONSCIOUS OR SUBCONSCIOUS MENTAL ACTION.

The Balance between Influence upon the Conscious and Subconscious Mind—Religious, Scientific, and Artistic Conceptions—Expressed in Idealism, Realism, and Idealised Realism—In the Good, True, and Beautiful; the Sublime, Picturesque, and Brilliant; the Grand, Simple, and Striking—The Sublime—Illustrations—The Picturesque—The Brilliant—Distinction between the Beautiful and the Brilliant—The Grand as Allied to the Horrible—The Simple to the Pathetic—The Striking to the Violent—True in All the Arts—The Epic—The Realistic—The Dramatic—Aim of Epic-Recital—Of Realistic—Of Dramatic—Epic Art-Products—Realistic—Historic—The Historic Distinguished from the Dramatic—Dramatic Poetry: Lyrics—Dramatic Character-Painting—*Genre* Painting—Dramatic Painting Proper—Historic Distinguished from Dramatic Sculpture—Practical Object of These Distinctions.

WE have found that the peculiarities of the conceptions respectively represented in each of the arts are attributable to the different degrees in which the mind is influenced from within or from without. There are also different degrees in which the mind, whether influenced from within or from without, is stimulated to exercise what, in Chapter III., were termed its conscious or its subconscious powers. In this chapter it is to be shown that, in each art, there are certain subdivisions determined by the relative influence exerted upon conception from the one or the other of these sources.

According to what was said in Chapter III., there are three different general methods of forming conceptions. These are the *religious* method, in which subconscious intellection is supreme; the *scientific*, in which conscious intellection is supreme; and the *artistic*, in which neither is supreme, but sometimes the subconscious acts the more strongly, sometimes the conscious, and sometimes the effect of the one exactly balances that of the other. This is the samé as to say that in artistic conceptions at times that tendency which is characteristic of the religious may be the more prominent; and, at other times, that tendency which is characteristic of the scientific; and that, therefore, aside from the tendency which, as characteristic of an even balance between the two forms of intellection, is in the highest sense artistic, two other tendencies may also be artistic, one of which, without crossing the boundaries of art, inclines, nevertheless, toward religion, and the other toward science.

Here we have suggested three divisions of artistic representation. They may be termed respectively the *religious-artistic*, the *scientific-artistic*, and the *artistic-artistic*. The three respectively give rise to three different classes of expressional results. These are apparently produced, in the first class, from *behind* the form; in the second, *in* the form; and in the third, *through*, *with*, or *by* the form. *Religious-artistic* expression, which is that of the first class, seems to be spontaneous, and comparatively free from any conscious endeavor to limit or fit the subject-matter to the form of representation. *Scientific-artistic* expression, which is that of the second class, seems to be under the influence of that which would accurately measure the subject-matter and accommodate it to the form. *Artistic-artistic* expression, which is that of the third class,

seems aimed to emphasise the subject-matter through emphasising also the forms, and causing it to transfigure them. The first tendency, in conforming the representation to the idea within, naturally gives expression to that which is termed *idealism;* the second, in conforming the representation to the real conditions without, naturally gives expression to *realism;* and the third, in conforming the representation to the blending of these two other tendencies, naturally gives expression to what may be termed *idealised realism.*

The respective tendencies thus distinguished will enable us to classify, and, sufficiently for our purpose, to define certain terms with which every one is more or less familiar. Three of these terms, all of which seem to be determined chiefly by the relation of the result to the *religious* or spiritual tendency, because they are mainly attributable to the source or subject-matter of the expression, are the *good*, allied to the religious; the *true*, allied to the scientific; and the *beautiful* allied to the artististic. Three more terms, all of which seem to be determined chiefly by the relation of the result to the *scientific* tendency, because they are mainly attributable to the nature of the expression when the subject-matter comes in contact with form, are the *sublime*, allied to the religious; the *picturesque*, allied to the scientific; and the *brilliant*, allied to the artistic. Three remaining terms, all of which seem to be determined chiefly by the relation of the effect to the *artistic* tendency, because they are mainly attributable to the expressional result when the subject-matter has passed through the form and is exerting an influence on the man who contemplates it, are the *grand*, allied to the religious; the *simple*—called thus because not elaborated or changed essentially from the

condition in which it is presented in nature,—which is allied to the scientific; and the *striking*, allied to the artistic.

Upon thinking over the characteristics indicated by these terms, no one will have difficulty in recognising the reason why the subject-matter of religious-artistic expression should be termed distinctively *the good;* or why the subject-matter of scientific-artistic expression, which is concerned chiefly in causing the forms of art to be accurate representations of the forms or laws of nature, should be termed distinctively *the true;* or why the subject-matter of artistic-artistic expression, as the very term artistic suggests, should be termed distinctively *the beautiful.* Nor need there be difficulty in recognising the appropriateness of the terms that have been used to designate the effect of the expression where it comes into contact with the form. The religious-artistic tendency, of course, must be that which is most spiritual and intangible, the most nearly allied to the infinite, eternal, and absolute essence or force lying behind the material forms supposed to embody it. A moment's reflection will show us that this same tendency can always be affirmed of an expression which we term *sublime.* The sublime conveys an impression of a conception too disproportionately large to be distinctly embodied in a material form or even to be entirely grasped by human apprehension. Here, for instance, is Milton's celebrated description of Satan, so often used as an illustration of this sentiment:

> He above the rest,
> In shape and gesture proudly eminent,
> Stood like a tower; his form had not yet lost
> All her original brightness, nor appeared
> Less than arch-angel ruined, and the excess

> Of glory obscured ; as when the sun, new risen,
> Looks through the horizontal misty air,
> Shorn of his beams ; or from behind the moon
> In dim eclipse disastrous twilight sheds
> On half the nations ; and with fear of change
> Perplexes monarchs.
>
> *Paradise Lost*, *i.*

A similar vagueness is characteristic of Michael Angelo's picture of "The Last Judgment," as well as of his statue of "Moses," whose colossal proportions and divine mien are suggestive of far more spiritual breadth of force than can fitly be contracted within the limits of a human figure. "In the sublime," says Edmund Burke, in his "Essay on the Sublime and Beautiful," "the mind is hurried out of itself by a crowd of great and confused images, which affect because they are crowded and confused ; for separate them, and you lose much of the greatness ; and join them, and you infallibly lose the clearness."

When the subject of artistic conception becomes entirely comprehensible and tangible, it passes to the method of expression which has been termed scientific-artistic. Science deals with facts as they are ; and the scientific tendency in art represents thoughts, sights, or events with literal fidelity. It does not labour to rearrange them so as to make them conform to some ideal standard either in the mind or out of it. To quote from Sir William Hamilton in his "Lectures on Metaphysics" : "Variety, even apart from unity, is pleasing ; and if the mind be made content to expatiate freely and easily in this variety without attempting painfully to reduce it to unity, it will derive no inconsiderable pleasure from the exertion of its powers. Now the *picturesque* object is precisely of such a character." The following, for instance, is picturesque ;

and if it were represented in a painting, or in architecture, as it might easily be, it would, of course, furnish an illustration of the picturesque in these arts also:

> And me that morning Walter showed the house,
> Greek, set with busts; from vases in the hall
> Flowers of all heavens, and lovelier than their names,
> Grew side by side; and on the pavement lay
> Carved stones of the abbey-ruin in the park,
> Huge Ammonites, and the first bones of Time.
> And on the tables every clime and age
> Jumbled together; celts and calumets,
> Claymore and snow-shoe, toys in lava, fans
> Of sandal, amber, ancient rosaries,
> Laborious Orient ivory, sphere in sphere,
> The cursed Malayan crease, and battle-clubs
> From the isles of palm; and higher on the walls
> Betwixt the monstrous horns of elk and deer
> His own forefathers' arms and armour hung.
>
> *The Princess: Tennyson.*

When the subject of conception comes to be expressed in form, the artistic impulse to rearrange and to reshape is sometimes so strong as virtually to transfigure the form. This condition gives rise to the *brilliant*. In the *sublime*, the subjects represented seem too large or grand for the form; in the *picturesque*, they seem exactly reproduced in the form; in the *brilliant*, they seem enhanced in value by the form, or, as we might say, the form seems too large for them. The effect in the last case is like that of placing a lens before a picture. The brilliant is characterised, therefore, by the opposite of vagueness, *i. e.*, by luminosity; by a luminosity, too, which gives not only light, shade, and colour, but outlines also that often seem greatly magnified. Of course, in the brilliant, the subject-matter may be of importance, but this is not necessary. The following passage derives its artistic value

from subordinate considerations added to the principal subject-matter in order to enhance the brilliancy of the presentation:

> I saw young Harry,—with his beaver on,
> His cuisses on his thighs, gallantly arm'd,—
> Rise from the ground like feather'd Mercury,
> And vaulted with such ease into his seat,
> As if an angel dropp'd down from the clouds,
> To turn and wind a fiery Pegasus,
> And witch the world with noble horsemanship.
>
> *1 Henry IV., iv., 1: Shakespeare.*

By classifying the *brilliant* rather than the *beautiful* as the distinctively artistic tendency of the same impulse which, considered in relation to the *good*, causes the *sublime*, one escapes from such a criticism as is made by Chaignet in his "Les Principes de la Science du Beau" upon the inclination manifested by most writers to separate the sublime altogether from the beautiful. He furnishes a very striking illustration of the close connection between the two by using three successive quotations. One is from Jouffroy. In this, in order to show the difference between the effects of two works of art, the writer says that, in gazing at the Aolplo, you recognise that you experience the pleasure of the beautiful; whereas in gazing at the Laocoön, "you experience the emotions of the sublime." The next quotation is from Lessing, who declares in his "Laocoön" that one experiences the sensation of beauty in that statue; and the third is from Winckelmann, who says in his "History of Ancient Art" that one experiences the sensation of the sublime in the face of the Apollo. When doctors disagree thus there must be a good reason for it. "Therefore," argues

Chaignet, "the sublime is not different from the beautiful, only one department of it."

There is no need of illustration to show the general connection between the *sublime* and the *grand*, the *picturesque* and the *simple*, or the *brilliant* and the *striking*. It may be of interest, however, to show the connection between the first two and the expression of the non-pleasurable as in the *horrible*, *e. g.*:

> What may this mean
> That thou, dread corse, again, in complete steel,
> Revisitest thus the glimpses of the moon,
> Making night hideous; and we, fools of nature,
> So horridly to shake our disposition
> With thoughts beyond the reaches of our souls?
> Say, why is this?
>
> *Hamlet, i., 4: Shakespeare.*

Also between the *picturesque*, or the *simple*, and the *pathetic*, *e. g.*:

> She lived unknown, and few could know
> When Lucy ceased to be;
> But she is in her grave, and O
> The difference to me!
>
> *The Lost Love: Wordsworth.*

As well as between the *brilliant*, or the *striking*, and the *violent*, *e. g.*:

> All the contagion of the south light on you.
> You shames of Rome! You herd of— Boils and plagues
> Plaster you o'er; that you may be abhorred
> Farther than seen, and one infect another
> Against the wind a mile!
>
> *Coriolanus, i., 4: Shakespeare.*

Whether manifested in music, painting, sculpture, or architecture we all associate the *sublime*, the *grand*, and the *horrible* with more or less of the same sort of vagueness in rhythm, melody, harmony, colour, or outline which

in poetry has been shown to suggest something beyond the possibility of exact formulation. In the same art-methods, too, we associate the *picturesque*, the *simple*, and the *pathetic* with that which is normal in effect, often in the sense of being exactly imitated from nature; and we associate the *brilliant*, the *striking*, and the *violent* with runs and chords in which each note, amid difficulties overcome by skill, rings out with exceptional distinctness; with colours, the exact hues of which, amid similar difficulties, it is impossible to mistake; and with outlines which, notwithstanding equal obstacles, stand out in correspondingly bold relief.

It has been said that the religious tendency in art leads to the representation of the *good*, the *sublime*, and the *grand*. A moment's thought will enable many of us to recall that these are exactly the characteristics most distinctive of what is termed *epic* art, a well-known definition of which is that of Blair in his "Rhetoric," namely, "the illustrating of some great and general idea." This might be improved by saying that it is the illustrating of a great idea or spiritual principle, through forms typical of the general effect of its influence.

It has been said, too, that the scientific-artistic tendency emphasises the connection between the thing signified and the form. Of course, the practical effect is great accuracy in the delineation, all the details of natural appearance, in the order of succession and of interaction, being, in a sense not true in epic art, necessary to the desired result. This we find to be the condition in what may be called *realistic* art—the art not necessarily of that which is termed realism, but the art which has the general tendency of realism, and may be defined as the delineating of material and mental effects in human and non-human life exactly

as, on the surface, they appear to be. The term *historic* has sometimes been applied to this form of art, but it is narrower in its meaning, and accurately distinguishes only one subdivision of the form.

Once more, it has been said that the artistic-artistic tendency emphasises the "form signifying." This is the characteristic of *dramatic* art, which accepts the influence of the subject-matter only after this has taken possession of a particular medium of expression and transfigured it, producing thus a result, as will be noticed, exactly the opposite of the religious-artistic tendency. Instead of giving supremacy to the general and indefinite, of which the form is typical, the dramatic emphasises the special and definite, thus enlarging the attractiveness and importance of the form itself, furnishing

> —to airy nothing
> A local habitation and a name.
>
> *Midsummer Night's Dream*, v., 1: *Shakespeare.*

In contrast to the epic and the realistic, the dramatic may be defined as the impersonating of individual characteristics as affected by considerations influencing them from within and from without. It will be noticed that the definition is broad enough to include dramatic effects as produced in and by not only human forms, but also those that are non-human.

These definitions of the three main divisions of art-form differ in phraseology, but correspond in essentials to the same as recognised many times before. Thus, Fuseli, in the third of his "Lectures on Art," says that, "in the epic, act and agent are subordinate to the maxim; and in pure history"—what has here been termed the realistic—"are mere organs of the fact; but the drama subordinates both fact and maxim to the agent, his character and passion."

The distinction between the three and also the natural order of sequence, as related to one another, may be better understood, perhaps, through an illustration. Suppose that one be moved to tell a story. That which first prompts him to do so is some thought, usually a general impression, which strikes him in connection with certain transactions that he has witnessed or heard; and because the impression remains, he tells the story in such a way as to convey to his hearers an impression similar to his own. His whole object in the recital, though he may not be conscious of it, is to make clear the impression, or, as we sometimes say, the *moral*, the *point* that has interested him, and so long as he does this, he cares little about accuracy in all the details. Now this is the condition requisite to the epic form of art, and, as all of us will probably recognise, this is the condition of the method most naturally adopted by those who gain the reputation of being good story-tellers. Therefore it seems appropriate that the Greeks, taking their term from a word meaning story, should have named this form, *par excellence*, the *epic*, or story-style.

But there is another way in which one may recall the same transactions. After reflecting upon them a little, he may begin to analyse the different deeds or words of the person implicated, and to ask himself, Why did this one do this or say that? These reflections will lead him to think more particularly of the details of the transactions and sayings, and of each of them in the order of its occurrence. When, after such a consideration, he comes to tell the story, although possibly he may not neglect to bring out that which at first seemed to him to be its "point," nevertheless this will appear subordinate to the accuracy with which he relates the details themselves and their

interaction. In other words, his desire to be true to the facts in their order of sequence—*i. e.*, to the scientific-artistic tendency—will realise the condition requisite to what has been termed *realistic* art; and with reference to this, it is evident that while such a mode of recital may render a story far less interesting as a mere story, it will render it far more satisfactory to a consideration purely intellectual and analytic.

Once more, there is a third way of telling the story. After analysing the different words and deeds of the persons engaged in the transactions, a man may become conscious of forming definite conclusions with reference to the motives and characters of these persons, and, as a result of his conclusions, he may be joyous or otherwise, according to the degree in which the events have pleased or grieved him. At this stage, he will be prompted to express his pleasure or grief; *i. e.*, his emotions, and, while doing so, in order to manifest his reasons and enforce their reasonableness on others, he will be led instinctively to imitate the expressions or appearances of the characters to whom he is referring. This gives us the condition requisite to *dramatic* art—from the word *dramare*, to act. In this form, the story is told, not with supreme reference to the *point* or *moral*, as in the *epic*, or to the *details* or *facts*, as in the *realistic*, but to the *effects* produced upon thought or feeling, and to the way in which they can be represented in *action*.

Among epic products we may place not only the distinctively epic poems of the world, like Homer's "Iliad," Virgil's "Æneid," and Milton's "Paradise Lost"; or distinctively epic sculpture, like the "Moses" of Michael Angelo; or epic painting, like the same artist's representation in the Sistine Chapel at Rome of the whole history of

creation together with the fall of Adam, the deluge, the Old Testament dispensation, and the coming of the Redeemer and his final separation of the good from the evil in the Last Judgment. We may place here, also, many symbolic and alleogrical poems, like the "Faerie Queene" of Spenser; many pictures of the same kind, like the "Poetry," "Science" or "Destruction of Jerusalem," by Kaulbach; and many statues, like the "Bavaria" at Munich.

Among realistic products, we may place non-epic narratives like some of the ancient ballads, "The Canterbury Tales" of Chaucer, or "The Borough" of Crabbe; also descriptive poems like Goldsmith's "Deserted Village" or Burns's "Cotter's Saturday Night"; and even didactic poems, when including, as they usually do, like Wordsworth's "Excursion" and Campbell's "Pleasures of Hope," narratives or description. Here, too, we may place the majority of landscapes and figure-paintings that are mainly imitative, like those of Teniers or Meissonier, and here, too, that great and important class of pictures and statues that goes by the name of *historic*.

In order to illustrate precisely what an historic painting is, Mr. Long, in his "Art, Its Laws and the Reasons for Them," speaks of Sir Joshua Reynolds's "Portrait of Elliott," the British commander at Gibralter in the year when it was attacked by the combined French and Spanish forces. "The painter's design was not simply to give a portrait of Mr. Elliott, but of General Elliott; not only that, but of the successful defender of Gibraltar upon that occasion. He has therefore represented him in his military costume, and holding in his hands a key, in symbolic allusion to the fact of that citadel's being the key to the Mediterranean. In the distance may be seen the two squadrons at the moment of battle, and behind him a

cannon pointed downwards to show the loftiness of the fortress,—all which surroundings connect him with that transaction, and thus make the representation a good illustration of historic portraiture. But to define more particularly the class under consideration, it may be proper to state that the painter of pure history does not, like the dramatic painter, represent that which might be, but that which was or is." Fuseli, in his third "Lecture on Painting" gives a still clearer description of historic art: "Fiction now ceases, and invention consists only in selecting and fixing with dignity, precision, and sentiment the movements of reality. Suppose that the artist choose the death of Germanicus,—he is not to give us the highest images of general grief which impress the features of a people or a family at the death of a beloved chief or father, for this would be epic imagery; we should have Achilles, Hector, Niobe. He is not to mix up character which observation and comparison have pointed out to him as the fittest to excite the gradations of sympathy; not Admetus and Alceste, not Meleager and Atalanta; for this would be the drama. He is to give us the idea of a Roman dying amidst Romans, as tradition gave him, with all the real modifications of time and place which may serve unequivocally to discriminate that moment of grief from all others."

From what has been said, it will be evident that to distinguish historic from dramatic painting is in some cases extremely difficult. Nor can it be done at all except by first deciding what is the predominating motive that the picture exhibits. When we look, for instance, at some of the products of the Dutch School, at a picture, say, of Teniers, or at some of the work of a painter like J. F. Millet (Fig. 5, page 61, and Fig. 7, page 91), we find much that suggests the dramatic. But when we seek for the pre-

dominating motive of the artist, we recognise that it must have been to picture the life of a peasant as he really saw it; and this leads us to class his work as realistic. On the contrary, when we look at a picture like Piloti's "Death of Wallenstein" or Gérôme's "Pollice Verso" Fig. 4, (page 41), it suggests, at first, only the historic; yet the predominating motive of the artist was so evidently to portray character as emotively affected by certain specific events that, as in the case of Shakespeare's historic plays, we can call the paintings historic in only the sense of being historico-dramatic.

Among the products of dramatic art, we may place not only plays intended to be acted, but also poems like "The Ring and the Book," by Robert Browning, or "Aurora Leigh," by Mrs. Browning, which, with primary reference to dramatic effect in the portrayal of situation or character, relate a tale or report a series of conversations. Here, too, belongs the *lyric* when at its best. In this case it produces the effect of a dramatic soliloquy, speech, or story, *e. g.*:

O let the solid ground
Not fail beneath my feet,
Before my life has found
What some have found so sweet!

Maud: Tennyson.

I am the daughter of earth and the water,
The nursling of the sky,
I pass through the pores of the ocean and shores,
I change, but I cannot die.

The Cloud: Shelley

"O Mary, go and call the cattle home,
And call the cattle home,
And call the cattle home
Across the sands o' Dee!"

The western wind was wild and dank wi' foam,
And all alone went she.
O Mary, Go and Call the Cattle Home: Kingsley.

The object of *dramatic* painting is to reveal the effects upon particular characters or temperaments of particular occurrences or surroundings, As in dramatic poetry, so in this kind of painting, all should be definite and vigorous, if not *brilliant* and *striking*. We place first here what may be called *character-painting*. The most typical form of this seems to be exemplified in that popular phase of art represented by "The Beggar Boys" of Murillo. But portraits, too, are often so composed as to come strictly within this class. Kugler, in his "Handbuch der Kunstgeschichte," says of the portaits of Titian's daughter, Lavinia: "One of the finest is in the Berlin Museum. Here the beautiful and splendidly attired girl is holding up a plate of fruit." "Another" is "in the possession of Lord De Gray, where, instead of fruit, she is holding up a jewel-casket. A fourth is in the Madrid Gallery, but here it becomes an historical representation; it is the daughter of Herodias." No one needs to have explained why portraits like this can be said to be *portraits in character*.

There are some paintings—not all—of the class usually called *genre* which seem to be dramatic. What other word can describe pictures like "The Card Players," by Caravaggio (Fig. 18, page 122)? In this, we see cards and money on a table. Seated on one side of this is a man with a dishonest face. On the other side, playing with him, is a man with an innocent face, evidently just the one to be made a dupe. Behind this last man, looking over his shoulder, stands a third, muffling his breath to prevent his presence from being detected, and holding up two fingers to let the

first player know what cards are being played by the second.

The *dramatic proper* in painting, as in poetry, sometimes differs from the historic in only the degree in which the historic features are subordinated. For instance though suggested by historic facts, the "Rape of the Sabines," and "The Women Taken in Adultery," by Poussin (Fig. 36, page 231), "The Descent from the Cross" (Fig. 1, Frontispiece), "The Crucifixion," and, more unmistakably, "The Lion Hunt," by Rubens, are dramatic rather than historic. So are the greater works of Raphael,—even those so apparently historic as "The Vision of Constantine," "The Burning of Borgo," "The Death of Ananias" (Fig. 37, page 233), and "The Defeat of Attila." This is so, because the design in them is to represent not general ideas, as in epic art, but specific persons; and not the literal facts with reference to these persons as in historic art, but certain conditions indicative of their characters. As Fuseli says, in the third of his "Lectures on Painting ':" . . . Leo, with his train, calmly facing Attila, or deciding on his tribunal the fate of captive Saracens, tell us by their presence that they are the heroes of the drama, that the action has been contrived for them, is subordinate to them, and has been composed to illustrate their character."

To distinguish between *historic* and *dramatic* sculpture is hardly necessary. All will recognise the one in the ordinary bust and statue erected to commemorate some person who has actually lived, and the other in such a product as the Laocoön (Fig. 19, page 123) or the so-called Dying Gladiator. There are developments analogous to those of the epic, the realistic, and the dramatic in both music and architecture. But they are not ordinarily noticed; and to point them out here would take up too much space. They

are treated in Chapters XX. and XXI. of the author's "The Representative Significance of Form."

One thought more, however, may be in place before closing this chapter. Some reader may be prompted to ask whether the distinctions between the epic, the realistic, and the dramatic that have been made are really necessary; whether they have any practical bearing. The answer to this is that everything has a practical bearing in art which tends to cause a product to convey an impression of unity, in accordance with the principles to be brought out in Chapter XIV. An art-product that is neither distinctly epic, realistic, nor dramatic is lacking in definiteness of effect—not in definiteness of thought, which is not always desirable (see page 115). Any lack of definiteness of effect is usually felt to be inartistic. Wholly satisfactory results can be attained by the artist in only the degree in which, throughout his work, he confines himself to one of the three general methods of presentation that have here been differentiated.

CHAPTER XII.

REPRESENTATION IN THE ELEMENTS OF FORM IN THE ARTS OF SOUND.

Recapitulation—Necessity of Studying the Elements of Representation—Especially as Produced through the Vocal Organs and Hands—In the Arts of Elocution and Gesture—Meanings of the Elements of Sound in Elocution—Duration Representing Mental Measurement in Music—In Poetry—Force Representing Mental Energy in Music—In Poetry—Pitch Representing Mental Aim or Motive—Directions of Pitch in Elocution—Principle Further Illustrated—Different Meanings of the Same Phraseology when Differently Intoned—The Same Principle Fulfilled in Music—In Modern Melodies—Other Illustrations—In Poetry—Illustrations—Quality Representing Mental Feelings—In Elocution—Analogies in Nature—in Music—In Imitative Music—Different Qualities in Music—In Poetry; Imitative Effects—Associative Effects.

HAVING considered the general form of mental conception naturally represented in each art, and the effect in each of representing different degrees of balance between that which is due to subconscious and to conscious mental action, we are now prepared to confine our attention to form. In doing this, it will be logical to start with that which is most internal in the form, and to end with that which is most external; in other words, to notice, first, the representative contents of the form, and, later, the representing composition.

As we have discovered, art is the representation of a man's thoughts and emotions through a use of the phenomena of

nature. What is to be said in this chapter has been suggested by the very evident fact that no representation of this kind would be possible unless the elements of which each art is composed were themselves representative both of mind, on the one hand, and of material nature upon the other; nor unless they were representative of these in a way so unmistakable that ordinary consideration could recognise the fact. What are these elements, and of what may they be said to be representative? Let us answer these questions.

In doing so, let us start by recalling the statement made in Chapter I., namely, that all forms of expression possible to art of the highest rank are developments of a man's use, for this purpose, of his vocal organs and of his hands. This statement at once suggests an inquiry into the methods through which vocal organs and hands can be made to express, or represent, thoughts and emotions. Evidently, only after we have ascertained this, can we be prepared to understand how the same can be expressed in the arts developed from these methods.

It is not necessary to argue that the best way of carrying on the inquiry just indicated is to go at once to the arts of elocution and of gesture. In the former, special study has been made of expression through the use of the vocal organs, and in the latter of the same through the use of the hands, primarily, and, secondarily, of the whole body.

In its use of the vocal organs, elocution has the power of producing, through the intonation of words, irrespective of their articulation, an almost endless variety of effects; and the argument is logically irresistible that these effects are the same in kind as are those of music and poetry. What, then, are the elements of elocutionary effect? We

shall find four of these. They can all be perceived by emphasising strongly the first syllables of *barbarous*, *murmuring*, *tartarize*, *Singsing*, or *papa*, or by emphasising a word like *go* in the sentence "I will *go* if so." In giving the emphasis, it will be noticed that the emphatic syllables and the word *go* are made to differ from that which accompanies them first, in *duration:* they are sounded in longer time; second, in *force:* they are sounded with more energy; third, in *pitch;* they are sounded on a key which, if used in music, would be relatively higher or lower in the musical scale; fourth, in *quality:* they are sounded with more fulness or thinness of tone. Simply by increasing the degree in which any of these elements enter into ordinary accentuation, we can increase the degree of emphasis represented by them.

What do these elements represent?—and, first, what does *duration* represent? What is indicated by fast time, and by slow time? Evidently these, respectively, imitate effects in nature that move rapidly and slowly. In addition to this, by way of association, rapidity is indicative of moods that are *joyous* or *mirthful;* or, as applied to special thoughts or feelings, of such as seem deserving of only brief consideration because they are *light* or *trifling*. *Slowness,* on the contrary, is indicative of *grave* and *serious* moods, of thoughts and feelings worthy of long consideration; therefore, of moods of *dignity* and *importance*. In other words, duration represents the *mental estimate*, or *degree of valuation*. What has been said hardly needs illustration. Every one can recall the general difference in rapidity between ordinary dance-music, as it is termed, and church music; or between a hornpipe and a hymn; and he knows, too, that this difference is determined not alone by the necessity of conforming the music to actual outward

movements, as in the dance, but also by the fact that the dance and the hornpipe represent, by way of association, *joyous, mirthful, light, trifling* moods, and that the church music and the hymn represent the opposite.

Precisely the same principles are fulfilled in poetry. The following represents a galloping movement:

I sprang to the stirrup, and Joris, and he;
I galloped, Dirck galloped, we galloped all three.
How They Brought the Good News: Browning.

And the following a painfully slow movement:

First march the heavy mules securely slow;
O'er hills, o'er dales, o'er crags, o'er rocks they go.
Pope's Tr. of the Iliad.

This indicates a joyous, light mood:

My eyes, how I love you,
You sweet little dove you,
There's no one above you,
Most beautiful Kitty.
Kitty: Anon.

And this a matter of seriousness and importance:

Where through the long-drawn aisle and fretted vault
The pealing anthem swells the note of praise.
Elegy in a Country Church-Yard: Gray.

Passing on now to *force*, there is no difficulty in determining what it means, through observing the manifestations of it in nature. Great force, of course, represents that which, in nature, has a *loud sound*, or is so *vast in size* that its sound, if produced, would be expected to be loud; and slight force indicates that which has a *soft sound*, or is so *small* that its sound, if produced, would be expected to be soft. Besides this, *great force*, involving loudness of tone, indicates *great energy*, either of body or of mind; as in expressions of *earnestness, strength, self-assertion, vehemence*. For an analogous reason, *slight*

force, involving softness of tone, indicates the opposite, *i. e.*, *little energy*, as in expressions of *indifference*, *weakness*, *gentleness*, *mildness*. Force may thus be said to represent the *mental energy*. It is in fulfilment of these principles that Haydn imitates, as one may say, the roaring of a storm in the chorus in "The Creation," beginning "The Lord devoureth them all"; and Wagner the singing of a bird in the forest scene in "Siegfried." It is in fulfilment of the same, that a "march" is loud and rousing, and a "cradle-song" soft and soothing.

Similar forceful effects are produced in poetry through the use either of series of long syllables, *e. g.*:

> When Ajax strives some rock's vast weight to throw,
> The line too labors, and the words move slow.
>
> *Essay on Criticism: Pope.*

Or of strongly marked accents, *e. g.*:

> Louder, louder chant the lay;
> Waken lords and ladies gay!
>
> *Hunting Song: Scott.*

And weak effects through series of short syllables, *e. g.*:

> Then we let off paper crackers, each of which contained a motto,
> And she listened while I read them, till her mother told her not to.
>
> *Ferdinando and Elvira: Gilbert.*

Or of weak accents, *e. g.*:

> So he with difficulty and labour hard
> Moved on with difficulty and labour he.
>
> *Paradise Lost, 2: Milton.*

In accordance with the principle of correspondence, the conditions of *pitch* high or low, or its movements in directions upward or downward in the musical scale, seem to be in exact analogy with correlated conditions and directions with which we are all familiar in the external world of space about us; and, like them, to indicate the mental *aim* or *motive*. When, for instance, one is

elated, he holds his head high, and his movements are varied like those of a buoyant schoolboy. When one is depressed, his head bends downward and his movements are few. It is the same with the utterances. A soaring bird sings in a high and changing key, a crouching man threatens, or a dog growls in a low and monotonous key. High and varied tones, therefore, seem to represent elation of spirit, or that which is felt to be elevating in its influence; and low and uniform tones represent depression of spirit, or that which is felt to be impressive.

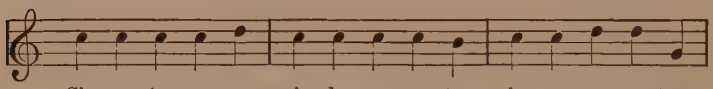
The same is true with reference to movements in the *directions* of pitch. Its tendency, when two or more tones of different pitch are heard in succession may be upward or downward, or both upward and downward. In the last case, as in the circumflex inflection, there is merely a combination of the meanings in the other two cases, and we need not consider it here. (See the author's "Orator's Manual," pp. 56-59.) When directed upward or downward, pitch follows laws applicable to all movement. Men lift their bodies, limbs, and feet, when they start to do something. They let their hands fall at their sides and sit down or lie down, when they get through with what they have to do. The lungs rise in inspiration and fall in expiration. So with voices in speaking. Their sounds rise when a man feels inspired to begin to say something, *e. g.*, "If só, I will go." They fall when the inspiration is over, because he has ended saying this, *e. g.*, "If so, I will gò." In other words, upward and downward movements of pitch represent the *mental motive*. The voice rises when one is moved to open, and falls when moved to close, the expression of an idea. It must be borne in mind, however, that these directions of pitch depend on the relations of utterance to the sense, and

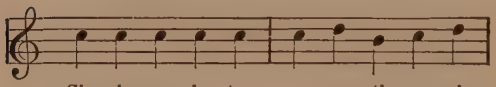
not merely to the sentence. If the sense does not close or open where the sentence does, the tones may fall before its close and rise at its end, *e. g.*, "I will gò, if só," "Will you gó?" Nò, I will nòt, if he's thére."

We may extend, and, at the same time, explain this by saying that the voice rises for the purpose of *opening* or *broaching* an idea; that is to say, for the purpose of *pointing away* from the thought immediately expressed, *e. g.*, when one is inclined to consider the utterances merely *anticipative* or *indecisive*, in the sense of being in themselves *subordinate*, *insignificant*, *trite*, *negative*, or *questionable*, as contrasted with something that is expected to be, or that has been, expressed by the falling inflection. On the contrary, the voice falls for the purpose of *closing* or *completing* an idea; that is to say, for the purpose of *pointing to* the thought immediately expressed, *e. g.*, when one is inclined to consider the utterances *conclusive* or *decisive* in the sense of being in themselves *interesting*, *important*, *noteworthy*, *affirmative*, or *positive*. It falls whenever it gives its sentence in the sense either of having completed the expression of a sentiment or of having uttered something sententiously.

In order to recognise the degree in which, even in speech, intelligence of the motives that are directing the thoughts or feelings may be convey by methods other than by the mere articulations which cause the sounds to be words, notice, in the following examples, how the same phraseology may be made to convey entirely different meanings. "We all know his wórd is a little uncértain," indicates the trite, the well known. "We all know his wòrd is a little uncèrtain," indicates the noteworthy, the important. "There is a páth through the wóods hére," indicates indecision in view of the doubtful.

"There is a pàth through the wòods hère," indicates decision in view of what is not considered doubtful. "It múst be so," indicates the questionable; "It mùst be so," indicates positive assurance. "He declaims very wéll," gives questionable praise to the mediocre; "He declaims very wèll," positively commends the excellent. "John has returned hóme," questions the action, or produces the effect of disapprobation; "John has returned hòme," affirms the action, and often expresses approbation of it.

That similar principles apply to the movements of pitch in the melody of music, we might infer as a result of considering the subject theoretically. But we can not only infer it, but perceive it as a result of a practical study of facts. Notice the following text, which was connected with the notation of the Gregorian chants, written in the sixth century:

Sic can - ta com-ma, sic du - o punc-ta: sic ve - ro punctum.
Thus sing the com-ma, and thus the co - lon: and thus the full stop.

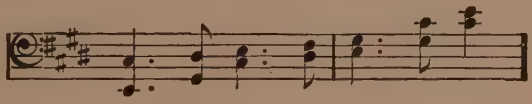
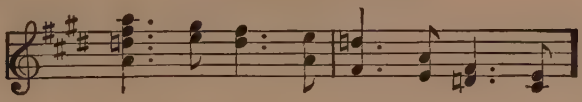


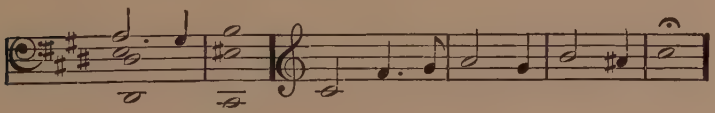
Sic signum in - ter - ro - ga - ti - o - nis.
Thus sing the mark of in - ter - ro - ga-tion.

It is now acknowledged that, historically, all our modern European systems of melody, and, through them, of harmony, have grown out of these chants, or at least have come down to us through them. Could a stronger proof be afforded that music is a development of that which in its incipiency is representative? These chants to which, or through which, all modern music is traceable, were de-

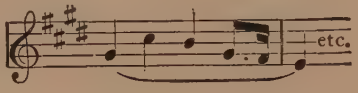
liberately composed in order to be representative, and nothing else.

The representative character of the movements of musical pitch is well-nigh equally manifested in modern melodies. Except where the significance of these depends upon their connection with harmony, and, therefore, necessitates the application of a different principle, it will be found that almost always in the degree in which they commend themselves to general taste to such an extent as to continue to preserve their popularity, in that degree they parallel the movements natural to the speaking utterance of the sentiments to which they give expression. See the music on page 82.

As an illustration of pitch used in order to indicate actual upward movements in nature, notice how Wagner in "The Reingold" represents Erda, the mother of earth, as with her daughters, the Nornes, she comes up from below:

and later how she sinks downward again:

Notice, too, the upward movement in the "Question to Fate," in Wagner's "Walküre":



And the conclusive effect of the downward movement

in what is called the "Slumber Motive," suggesting rest from labour, in the same opera:

It might be supposed that there would be nothing in poetic form corresponding to these upward and downward movements. But, as a fact, any metre causing a line to begin with an unaccented syllable, or to end with an accented syllable, produces, in what are termed the tunes of verse,—unless, as sometimes, the sense requires a different inflection,—the effect of an upward movement. Therefore, this metre naturally suggests the *anticipative*, *indecisive*, *subordinate*, *questionable* effect of the the upward inflection, *e. g.*:

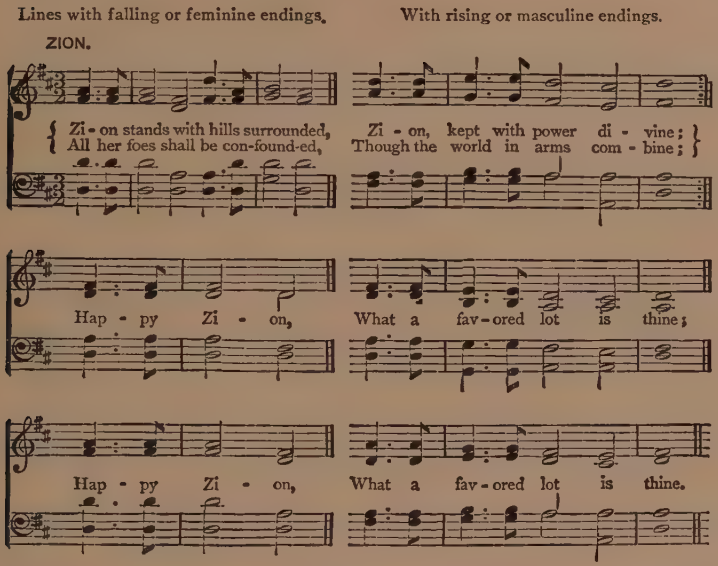
Among the fancies tell me this,
What is the thing we call a kiss?
I shall resolve ye what it is.
The Kiss: R. Herrick.

On the other hand, a line beginning with an accented or ending with an unaccented syllable, produces the *final*, *decisive*, *interesting*, *important*, *affirmative* effect of the downward movement or inflection, *e. g.*:

Love he comes and Love he tarries,
Just as fate or fancy carries,—
Longest stays when sorest chidden,
Laughs and flies when pressed and bidden.
The First Kiss: Campbell.

Come in the evening, or come in the morning;
Come when you're looked for, or come without warning;
The Welcome · T. Davis

In this connection, notice the following like effects of pitch shown in the melody both of the music and of the verse.


Lines with falling or feminine endings.
With rising or masculine endings.
ZION.
Zi - on stands with hills surrounded,
All her foes shall be con-found-ed,
Zi - on, kept with power di - vine;
Though the world in arms com - bine;
Hap - py Zi - on,
What a fav - ored lot is thine;
Hap - py Zi - on,
What a fav - ored lot is thine.

Let us now ask what is represented, either in elocution, music, or poetry, by *quality* of tone. It certainly is not, as in the case of force, mental energy. When a Patti passes from a loud to a soft, or from an abrupt to a smooth tone, she changes greatly the kind of energy, but her voice still retains the same Patti-quality. Nor does quality represent mere intellectuality. A man, without changing in the least an habitual nasal or wheezing quality, may give every inflection needed in order to represent the merely mental phases of the motive that actuates him. But if we frighten him severely, we may make it impossible

for him to use any other sound than a whisper, *i. e.*, the *aspirate* quality; if, in connection with this, we anger him, he will hiss; or, if at length he recover his voice, he will use the harsh, jarring, interrupted hard-*g* quality of tone, termed the *guttural;* or, if that which he would repel be too great to make anger appropriate, it may widen and stiffen his throat so as to produce the hollow, almost inarticulate indication of awe and horror given by what is termed the *pectoral* quality. Release him now from the influence of fright, anger, or horror, and put him into a gently satisfied mood, and he will use his nearest approach to *pure* or *normal* quality. Stir him then to profound emotion, inspired by what is deeply satisfying, and all his vocal passages will expand again, and he will produce his nearest approach to the full, round, resonant quality termed *orotund.*

For these reasons, it seems indisputable that, as applied to vocal expression, quality represents the attitude of the *emotive* nature, *i. e.*, the *feeling* that one has toward that which is perceived. Three of the qualities refer to what one wishes to repel, *viz.*, the hissing aspirate indicating feelings like *affright*, *amazement*, *indignation*, and *contempt;* the guttural indicating *hostility;* and the pectoral, *awe* or *horror.* Three other qualities refer to what, if not wholly satisfactory, at least excites in one no movement aimed against it. The soft whisper indicates feelings like *surprise*, *interest*, or *solicitude;* the tone termed distinctively the pure or normal represents *gentle contemplation* of what may be either joyous or sad; and the orotund represents deep *delight*, *admiration*, *courage*, or *determination*, as inspired by contemplation of the noble or grand.

As is true of duration, force, and pitch, so all these forms of quality have their correspondences in effects of

nature as manifested in other departments. Applied to effects of water, for instance, a rushing stream would represent the harsh aspirate, a rocky stream the guttural, a roiled stream the pectoral, a rippling stream the gentle aspirate, a clear stream the pure, and a full, deep stream the orotund.

That analogies exist between quality as used in elocution and in music, scarcely needs to be argued. There can be no very radical differences between possibilities of quality in speaking and in singing, and it is inevitable that the mind should be influenced by the resemblance, or supposed resemblance, of the tones even of musical instruments to some effect natural to the human voice, or else produced in some other way in nature. In determining such resemblances, too, one would probably be influenced by the uses which, as a rule, are made of the particular instruments which he is hearing. It is undoubtedly owing to associations of this kind that we read of the stirring tones of the fife and drum, the solemn tones of the organ, the purity and softness of the flute, the gaiety and triumph of the trumpet, the woe and complaint of the bassoon, the pathos and humaneness of the violin.

There are effects of quality, too, which undoubtedly are purely imitative, fulfilling the requirements of comparison as well as of association. All of us have heard representations of battles and thunder-storms made such through using drums and cymbals, of birds through using flutes, and of sleigh-rides through the tinkling of bells and the cracking of whips. But, possibly, we do not all realize that such forms of imitation are not confined, as is sometimes supposed, to works of a low order of merit. For instance, in Wagner's "Walküre," to quote from Hans von Wolzogen, "The wind blows, the thunder rolls, light-

ning flashes in the rising and falling sway of the orchestra and of the stroke of the weather-god's hammer in the 'Motive of the Storm'." There is no doubt, too, that the effects produced by the violins in the forest-music preceding the song of the bird in "Siegfried," as well as in the pastoral symphonies of Handel and of Beethoven, are intended to imitate, as heard in the warmth of a summer's day and stirred by a gentle breeze, the rustling of leaves and the buzz and soft hum of insects; in fact, the same as is imitated in another art by Tennyson, when in "The Princess," he speaks of

> The moan of doves in immemorial elms,
> And murmuring of innumerable bees.

These differences between the representative qualities of different musical instruments depend partly upon what their sounds are in themselves, and partly upon the way in which they are produced—a violin, for instance, being played sometimes with a bow and sometimes with the finger. But that the differences exist, and that they are representative, is almost universally recognised by both composers and audiences. When, for instance, in listening to an opera, we hear predominantly the clash of the cymbals or rattle of the kettle-drums, associated, as these usually are, with the sharper tones of the metallic instruments, we know that the sounds, as in the last act of Mozart's "Don Juan," where hell is supposed to await the hero, represent, according to the degrees of their intensity, not only the startling, but the *hostile* and *menacing* effects which, in the human voice, we associate with *guttural* quality. If any action of the play follow what we hear, we expect to see some violent conflict full of malignity and peril. When the predominating sounds are those of the bass drums and the lower, more hollow tones of

either the wind or the stringed instruments, we know that, as in the orchestration which in Wagner's "Siegfried" accompanies the hero's encounter with the dragon, they represent the presence of that which inspires to *awe* and *horror* such as, in the human voice, we associate with the *pectoral* quality. The resemblance to this tone in its milder forms is that which imparts a solemn effect to some of the music of the church organ. When again the predominating sounds are those of the wood-instruments—the clarinet, the flute, even, to some extent, the organ—we feel that these represent the *gently satisfied* mood, the *peaceful contemplation* which, in elocution, is indicated by *pure* or *normal* quality. When, instead of the wooden wind instruments, we hear the metallic, as either in the organ or in trumpets and instruments of similar character, we feel that these represent the more profound emotions, the *admiration*, *enthusiasm*, *courage*, *determination*, that we are accustomed to associate with elocutionary *orotund* quality. To such music we expect to see troops march on to the stage, as in the Soldiers' Chorus in Gounod's "Faust," giving vent to their confidence in anticipation of victory, or to their joy in view of its accomplishment. Once more, when we hear the stringed instruments we recognise that it is their peculiar function to impart *intensity of feeling*, just as is true of the elocutionary *aspirated* quality. Hence, the reason for the use of the violins in that scene in Wagner's "Meistersinger" which takes place in the house of Hans Sachs; or in the Venus music of his "Tannhaüser"; or in the waltz music of Gounod's "Faust." Just as in the case of the elocutionary aspirate, too, so here the effects of these stringed instruments may partake of those of any of the other instruments. Not only when associated, as in orchestral music,

with the instruments that have been mentioned, but even when not associated with these, the sharper tones of the strings suggest the *aspirated guttural*, their lower hollow tones the *aspirated pectoral*, their struck tones as in the piano, the guitar, and the harp, the *aspirated pure*, or *normal*, and their tones as produced by the bow, the *aspirated orotund*.

Those familiar with poetry will recognise, at once, how the principles just mentioned apply to it. Here, produced by the quality of tone necessitated in uttering certain vowels or consonants, are distinctively imitative effects: Of the sounds of a knife when carving:

> Ancient rosaries,
> Laborious orient ivory, sphere in sphere.
> *The Princess: Tennyson.*

And here of the *loud dashing* and *soft rippling* of *waves;*

> Roared as when the rolling breakers boom and blanch on the precipices.
> *Boädicea: Idem.*

> The murm'ring surge
> That on the unnumber'd idle pebbles chafes.
> *Lear, iv., 6: Shakespeare.*

And in this, of ice and rocks resounding with the *clanging* of *armour* and *footsteps:*

> The bare black cliff clanged round him as he based
> His feet on juts of slipp'ry crag that rang
> Sharp smitten with the dint of armèd heels.
> *Mort d' Arthur: Tennyson.*

And in this, of the *roar* and *clash* of *warriors* with their weapons and chariots:

> Arms on armour clashing bray'd
> Horrible discord, and the madding wheels
> Of brazen chariots raged.
> *Paradise Lost, 6: Milton.*

And in this, the clear, crisp atmosphere of a winter's evening:

How they tinkle, tinkle, tinkle in the icy air of night,
While the stars that oversprinkle all the heaven seem to twinkle
With a crystalline delight.

The Bells: Poe.

And here are associative effects produced by the likeness of the sounds of *s* and *z* to the elocutionary hissing aspirate, indicating *amazement*, *affright*, *indignation*, and *contempt:*

You shall digest the venom of your spleen
Tho' it do split you ; for from this day forth
I 'll use you for my mirth—yea, for my laughter—
When you are waspish.

Julius Cæsar, iv., 3 : Shakespeare.

Now crack thy lungs, and split thy brazen pipe ;
Blow, villain, till thy spherèd bias cheek
Out-swell the colic of puff'd Aquilon.

Troilus and Cressida, iv., 5 : Shakespeare.

By the likeness of the sound of *g* to the elocutionary guttural tone indicating *hostility:*

How the garden grudged me grass
Where I stood—the iron gate
Ground his teeth to let me pass.

A Serenade at the Villa : R. Browning.

By the likeness of the sounds of *au*, *ou*, and *oi* to the elocutionary pectoral indicating *horror:*

With staring countenance stern, as one astown'd,
And staggering steps, to weet what sudden stour
Had wrought that horror strange.

Faerie Queen, 1, 8, 5 : Spenser.

For a charm of powerful trouble,
Like a hell-broth boil and bubble.
Double, double toil and trouble,
Fire burn, and cauldron bubble.

Macbeth, iv., 1 : Shakespeare.

By the likeness of the sounds of *s* and *sh* to the elocutionary soft whisper indicating *interest*, *surprise*, *solicitude*:

She gave me for my pains a world of sighs;
She swore.—In faith 't was strange, 't was passing strange,
'T was pitiful, 't was wondrous pitiful.

Othello, i., 3: Shakespeare.

By the likeness of the sounds of the short vowels to the elocutionary pure or normal tone, indicating *gentle contemplation*:

Thoughts light, like gleams, my spirit's sky,
But they will not remain;
They light me once, they hurry by,
And never come again.

Despondency: Matthew Arnold.

And here the sounds of the long vowels and of *m*, *n*, *r*, and *l* are like those of the elocutionary orotund tone, indicating deep *delight*, *admiration*, *courage*, or *determination*:

Where each old poetic mountain
Inspiration breathed around,
Every shade and hallowed fountain
Murmured deep a solemn sound.

The Progress of Poesy: Gray.

Peace and order and beauty draw
Round thy symbol of light and law.

Barbara Frietchie: Whittier.

CHAPTER XIII.

REPRESENTATION IN THE ELEMENTS OF FORM IN THE ARTS OF SIGHT.

Correspondences in Arts of Sound and of Sight—Size Representing Mental Estimate—This Fact and Effects of Significance in Beauty—Large Size and Nearness—Same Principle in Architecture—Resumé—Massiveness or Touch Representing Mental Energy in Drawing—Painting—Sculpture—Architecture—Outlines Representing Mental Motive—Their Meanings in the Human Form—In Gestures of the Hands—Fist—Finger—Fullhand—Closing Gesture—Opening Gesture—Movements of Arms—Gestures Inward and Outward—Dramatic Gestures—General Actuating Motives Represented in the Gestures—Analogous Meanings in Natural Scenery, of Curves—Of Straight Lines and Angles—As Indicated by a Man's Use of them in Landscape-Gardening—In Painting—In Sculpture—In Architecture—Quality in Tone Representing Mental Feeling Finds Analogy in Colour—Cold and Warm Colours—Different Colours Corresponding to Different Qualities—Normal Tone and Cold; Orotund Tone and Warm Colour—Varied Colours and Exciting Effects—Red and Trumpet—Examples from Painting—Colours in Human Countenance—In Sculpture—In Architecture—Colours in Representing Distance—Applied to Buildings—Mixed Colours—Black—Black with Cold Colours—With Warm Colours—White with Cold Colours—With Warm Colours—Conclusion.

JUST as the elements representing thought or emotion in the arts of sound are traceable, primarily, to those of elocution, so the same, in the arts of sight, are traceable, primarily, to those of gesture. It is through the use of the body, but particularly of the hands, that we learn both to recognise and to make things that have, or do not have,

size, solidity, shape, or temperature. These four, respectively, correspond to the elements of representation already considered. *Size* or *extension* influences our mental *valuation* of effects of sight precisely as *duration* influences us when considering sounds; *solidity*, indicated in material bodies by different degrees of massiveness, and in pigments by apparent strength or weakness of touch in imparting light or shade, with or without colour, manifests degrees of mental *energy* in producing effects of sight just as *force* does when used with sounds; *shape* or *outline*, indicated by simple or mixed straight lines, angles, or curves, reveals the mental *aim* or *motive* in producing effects of sight precisely as *pitch* does in sounds; and *temperature*, subtly associated with the coming and going of different hues in the human hands and face, and, therefore, with *colour*, suggests to sight the same results of mental *feeling* conveyed by *quality* of tone.

To begin with *size* or *extension*, men have learned through their own experience in lifting, or from what they have seen of others' lifting, that a large object, one that fills a large amount of space, is, as a rule, heavier than small objects, and can consequently bear a heavier weight or, as we say, is stronger. It is evident, therefore, that comparatively large limbs, like those of the Farnese Hercules (Fig. 24, page 215), and large pillars, like those of Melrose Abbey (Fig. 25, page 216), necessarily suggest, by way of association, such conceptions as *heaviness*, *strength*, *immovability*, or *substantiality;* whereas comparatively slender limbs, like those of the Flying Mercury (Fig. 26 page 217), or apparently small pillars, like those of the interior of the church near Kostroma (Fig. 27, page 218), suggest, in the same way, a lack of weight and therefore such conceptions as *lightness*, *weakness*, *movability*, or *unsubstantiality*. No

one would expect the Hercules to be able to fly, but he might expect this of the Mercury. The columns of Melrose Abbey would seem out of place unless the roof were apparently heavy; and those of the church at Kostroma would be equally out of place unless the roof were apparently light.

FIG. 24.—FARNESE HERCULES BY GLYCON THE ATHENIAN.
See pages 214, 215.

Just here it may be well to point out the confirmation afforded by these facts of the view advanced in Chapter II., that beauty involves effects produced by significance as well as by form. Notice how true this is as applied precisely where the opponents of this view would be most likely to say that it could not be applied, *i. e.*, to the human form. No possible conception of the mere effects of curves, straight lines, or angles could account for the lack of beauty which all feel to be characteristic of clumsy members, especially of joints, as at the neck, wrists, and ankles; and of fragile members, especially where one

expects the opposite, as in the head, chest, and calves. The only way in which to account for these effects of size

FIG. 25.—MELROSE ABBEY, SCOTLAND
See pages 214, 215, 219, 261.

is to acknowledge that, by way of association, the clumsy members suggest a lack of agility and, therefore, of the possibilities of grace, and the fragile members a lack of

brain, lung, or brawn, and, therefore, of the possibilities of strength.

But to go back to the line of thought from which this is a digression, it may be said again that an object of large size, as contrasted with surrounding objects of small size, represents that which is *important* or influential.[1] At first thought, it might be supposed that the painter would find it difficult to represent by means of size, one of many figures as being important, and yet to represent all the figures as being of the same relative size as in nature. But a little reflection will enable us to realise that it is extremely easy for him to do this, merely through an application of the laws of perspective, *i. e.*, by depicting the important figure or figures as being in the foreground of an art-product and the unimportant figures as being in the background. This can produce the desired effect because, in addition to what has been indicated already, large size,

FIG. 26.—FLYING MERCURY, BY GIOVANNI DA BOLOGNA.

See pages 214, 215, 242.

[1] Thus in the temples and tombs of ancient Egypt, the great men are depicted as being four or five times larger than those about them. In connection with this arrangement, there is no application of the laws of the perspective, and, of course, the general effect is wholly unnatural.

as contrasted with small, indicates *nearness*. By carrying out the laws of the perspective, the grouping, either in painting or sculpture, may be made to represent both the

FIG. 27.—CHURCH NEAR KOSTROMA, RUSSIA.
See pages 214, 215, 219.

relations in the mind of the conceptions which are associated with the figures, and also the relations in nature of the appearances of the figures with which those of the art-product are made to compare. (See Fig. 2, page 3, and Fig. 4, page 41).

Effects of nearness or remoteness are produced in the same way in architcture. Massive outlines in walls, pillars, ceilings, domes, spires, lessen our appreciation of their distance from us. It is safe to say that although the actual measurements were the same, the width of the floor-space represented in Fig. 25, page 216, would appear to be scarcely more that half that in Fig. 27, page 218. So,

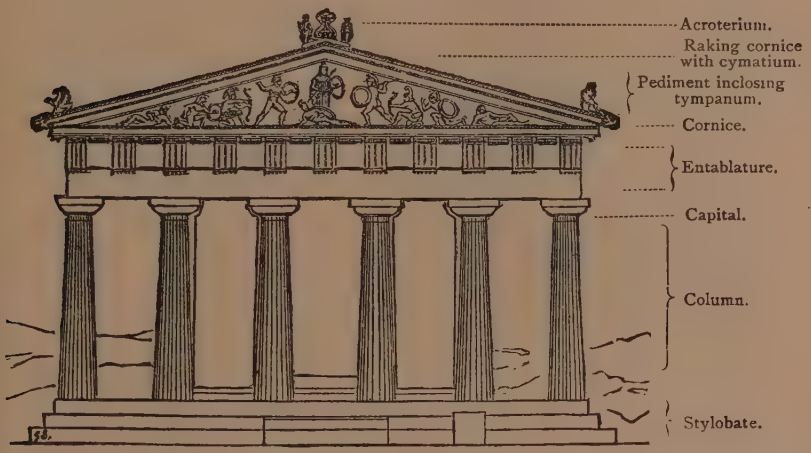


FIG. 28.—GREEK DORIC TEMPLE OF ÆGINA.

See pages 98, 219, 222, 225, 251, 252, 279, 296, 341.

too, owing to the massing of outlines in large, unbroken spaces, all Greek buildings appear, as a rule, smaller than Gothic buildings of the same dimensions in which there are details of ornamentation greater in number and more minute in size. Besides this, the Greek buildings usually appear lower. This is owing to the effect of contrast. The Gothic buildings are higher in proportion to their width. Compare the effects of the Gothic forms in Fig. 29, page 220 with the Greek forms in Fig. 28, page 219.

To sum up what has been said with reference to extension, in painting, sculpture, and architecture, relatively large and small size corresponding in this regard to relatively long and short duration, have respective representative effects. Either by way of association or of comparison, or of both, they respectively indicate what is *heavy*, *strong*, *substantial*, *immovable*, *important*, *influential*, *dignified*, *near*, on the one hand; or else, on the other hand, what is *light*, *weak*, *unsubstantial*, *movable*, *unimportant*, *uninfluential*, *undignified*, *remote*. This principle causes us, when looking at objects, to think more of a full-grown man than of a doll, more of a cathedral than of a cottage, more of the fingers on a statue than of the fringe on which perhaps, they rest, and more of the towers and domes of a building than of its chimneys and ventilators. The same principle applied in connection with the natural laws of the perspective, causes us to give more consideration to the full-sized figures in the foreground of a painting than to the minute objects in its background. If the picture be designed to interest us in animals, this fact is represented by large size that brings them to the front; if in a pasture in which they are feeding, by small size that sends them to the rear. Overbalancing foliage, with a cherub's face just visible in it, emphasises the prodigality of

FIG. 29.—HOUSES OF PARLIAMENT FROM OLD PALACE YARD.
See pages 126, 219, 222, 290.

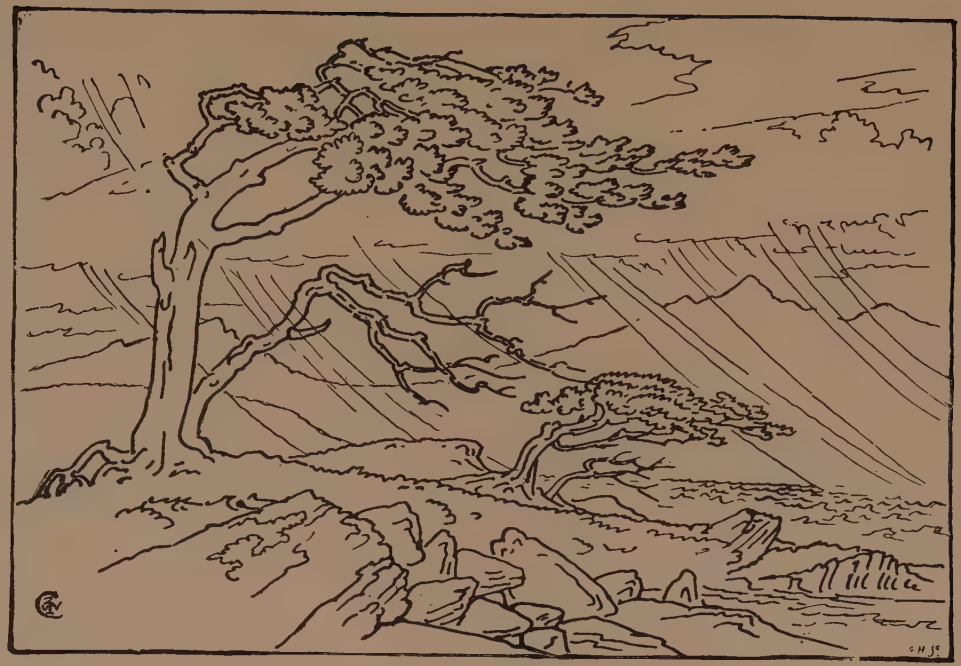


FIG. 30.—LINES EXPRESSIVE OF STORM.—W. CRANE.

See pages 222, 279.

inanimate nature. A full-sized statue, with a few flowers about it, emphasises the pre-eminence of man. In a building, the requirements for the support either of many occupants or of a heavy superstructure are represented by large foundations, wall, or pillars (see Fig. 28, page 219) accommodation for crowds, by wide entrances (see Fig. 34, page 227); for light in large, high rooms, by large, high windows (see Fig. 29, page 220); and for air, by lofty roofs or domes (Fig. 53, page 281; Fig. 79, page 354).

Passing on to the effects of relative *massiveness* or energy of *touch*, which in the arts of sight correspond to *force* as used with sounds, compare Fig. 30, page 221, with Fig. 31, page 223. Is it not a fact that the heavier and coarser lines, characterising the first of these, give one an entirely different conception of the degree of mental energy exerted by the artist than do the lighter and finer lines, characterising the second? From the first we receive an impression of strength; from the second, an impression of delicacy. Were the two produced by different artists, we might infer that the difference in their styles was owing to a difference in their mental characteristics. But notice, now, that there is a reason outside of the mind of the artist for the manifestation of energy in the one sketch, and of a lack of energy in the other. The heavy lines are representative not merely of the artist's own moods, but of these as excited by what he has seen, and with which, therefore, his moods are in sympathy. Nothing, so well as such lines, could manifest the impetuous fury of the storm, the violent swaying of the trees, or the resisting strength of these and of the rocks. Nor could anything, so well as the delicate lines, represent the restful gentleness of the other scene, the trees of which look as if unable to stand the slightest blow, and the shores of

FIG. 31.—LINES EXPRESSIVE OF REPOSE.—W. CRANE.

See pages 222, 279.

which seem ready to yield to the feeblest flood. Again observe in Fig. 3, page 19, the comparatively fine lines or the lack of lines used in the delineation of the texture of the marble and of the flowers. Is it not a fact that these differences in the shading or strength of lines, in such cases, can be rightly termed representative both of mental and of material conditions?

Of course, the same general principles must apply to lines produced through the use of colour. "By a few strokes," says Reynolds, in his eleventh "Discourse on Painting," "Titian knew how to mark the general image and character of whatever object he attempted." "Touch," says Charles Blanc in his "Grammar of Painting and Engraving," translated by K. N. Doggett—"touch is the handwriting of the painter, the stroke of his *mind*. . . . Leonardi da Vinci treated all his pictures with equal touch, smooth and melting. Titian himself made little difference, and only in the 'Peter Martyr' and 'The Assumption' he seems *led by his subject* to accents more animated, more marked than usual. . . . Poussin, painting 'Pyrrhus Saved' or the 'Rape of the Sabines,' treats his painting with a manly hand and intentional rudeness, while he guides the pencil with more gentleness when he represents 'Rebecca' and her companions."

The same differences between the representative effects of strength in outline are perceptible in sculpture also. In the Laocoön (Fig. 19, page 123), notice the feeling of energy and strength conveyed by the way in which the serpent and the human limbs are projected from the deep shadows which the arrangement of them necessitates. The same is true of Michael Angelo's statue of "Giuliano de' Medici, with Figures of Night and Day" (Fig. 8, page 96). In this not only the arrangement of the limbs, but

of all the surfaces, is designed to bring out strongly contrasting effects of light and shade. Considerably less forceful than these are the effects produced by mere reliefs such as we have in Fig. 9, page 97, and Fig. 10, page 98.

The same principles apply to architecture. Any one at all sensitive to æsthetic effects will feel, almost at a first glance, the impression of strength conveyed by the pillars of the Greek temples, as in Fig. 28, page 219, or by the pilasters of the Renaissance buildings, as in Fig. 32, page 225; or by the buttresses of the Gothic cathedrals, as in Fig. 33, page 226; or by any arrangements, perpendicular or vertical, that add to the possibilities and presence of shadows, as in Fig. 34, page 227. He will feel, too, the impression of a certain amount of structural weakness conveyed by plain walls, such as appear in Fig. 35, page 229. "As the great poem and the great picture," says Ruskin, in his "Seven Lamps of Architecture," "generally affect us most by the majesty of their masses of light and shade, . . . I do not believe that ever any building was truly great unless it had mighty masses, vigorous and deep, of shadow mingled with its surfaces."

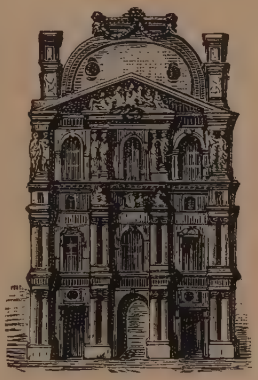


FIG. 32.—PAVILION OF RICHELIEU, PARIS.
See pages 325, 341.

In the arts of sound, especially in poetry, the effects of *force* and *pitch* usually go together. If, in a poetic foot, we accent one syllable, we almost invariably give it a different pitch from that of the unaccented syllable following it. There is the same connection between the corresponding

FIG. 33. COLOGNE CATHEDRAL—FAÇADE.

See pages 225, 251, 252, 261, 279, 290, 293, 317, 341.

elements in the arts of sight. When we give more force to a colour in painting by increasing the effects of light and shade, we usually change the kind, or, what may be termed the *pitch*, of the colour; and though certain buildings and statues seem to be devoid of colour, we cannot, except by using many different kinds of it, make pictures which will reproduce with absolute accuracy such effects as have just been attributed to relative degrees of massiveness or of energy of touch. The places where one colour gives way to another in painting usually seem to form lines; and the places where there seem to be lines in sculpture and architecture often separate colours. Let us consider what conceptions are represented by the different ways in which different masses of similar colour, or—what is the same thing—different *shapes* are separated from one another. In other words, let us consider what is represented by the different general directions and characters of the outlines forming contours.

FIG. 34.—CHURCH OF ST. MARK, VENICE.
See pages 126, 222, 225, 252, 279, 293.

In accordance with what was said on page 190, the best way of determining this is to start by considering the principles of gesture. Gesture represents thought or emotion through using, mainly, the hands. But the hands are connected with the human body; and we cannot fully

study what is expressed by them, without going back, for a moment, to ask what is expressed by the whole body with which they are connected, and of which they form a part. The representative characteristics of the body have been unfolded, at length, in the author's "Painting, Sculpture, and Architecture as Representative Arts." Here, after cautioning the reader to bear in mind that few individual forms manifest the features of any one type exclusively, it will suffice to say that, according to the principles of physiology and phrenology, *roundness* of form or feature, *i. e.*, curvature, represents the degree of vital or physical power; that *sharpness*, *i. e.*, angularity, represents the degree of mental or interpretive power; and that *length* represents the degree of motive or emotive power, *i. e.*, the degree of that self-control or of lack of it which is sometimes termed moral power. For instance, men with exceptionally healthy lungs or stomachs usually have large cavities in which they are placed; artists have noses and fingers—at their sides, or tips—that may be sharp and round, or sharp and long, but are always sharp; and extremely inflexible and scrupulous people are usually lank and long. If we separate the suggestions of different parts of the body, the torso seems best to represent the vital or physical; the extremities, especially the head and hands, to represent the mental or interpretive, as, for instance, in the hand-gesture; and the chest, shoulders, elbows, and knees, to represent the motive or emotive, as, for instance, when one is excited or embarrassed. Facial expression seems based upon the principle that the chin and lower lip best represent the vital or physical; the eyebrows and forehead best represent the mental or interpretive; and the nose and eyes best represent the motive or emotive. The movements of these features to repre-

sent particular conceptions correspond, when the head is lifted or lowered or turned sideways, to the arms; and

FIG. 35.—MARIEN PLATZ, MUNICH.
See page 225.

when the countenance is contracted, expanded, or drawn down, to the hands.

From these brief suggestions with reference to the

representative effects of the different parts of the body as a whole, let us turn to consider the gestures formed by the hands. We may begin by saying that there are three planes on which the stroke of a gesture may be made. One is *on a level* with the breast, which is the seat of the motive or emotive nature. One is *below* the breast, and one is *above* it. The principle underlying the phase of thought represented by the hand, when carried to either of the three planes, is as follows: Every one inside of a body feels or conceives himself to be at the centre of the universe, which the horizon rims, the earth grounds, and the zenith domes. When he gestures, he cannot do otherwise than give expression to this feeling. His hands are carried *on a level* with the breast to represent what he conceives to be on a physical, and hence, by analogy, a mental or moral level with himself. They move *before* him to indicate that which he really sees there, or to refer ideally to the truth or hope that he anticipates in the future. They move *behind* him to indicate that which is really behind him, something that he has abandoned or turned from possibly with loathing or regret; or they may refer ideally to a condition of opinion and life beyond which he has progressed. They move *to one side* to refer to some actual physical presence there, or, ideally, if the hand indicate exclusion, to something that is a side issue from the main line of his thought; possibly to some course that is a diversion from straightforward action. But if the hand do not indicate exclusion, the gesture to the side may refer to the general and comprehensive. The hands are carried *below* the breast to represent that which one conceives to be physically, mentally, or morally below himself; *i. e.*, below his sight, comprehension, or control; to indicate a pathway, an idea

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FIG. 36.—THE WOMAN TAKEN IN ADULTERY. N. Poussin.

See pages 193, 234, 236, 240, 241, 290.

that he can understand, a power that he can master. They are carried *above* the breast to represent that which he conceives to be physically, mentally, or morally above himself; above his sight, comprehension, or control; to indicate a star, a grand idea, a mighty force.

In applying these principles, it must always be borne in mind that the different directions of the gesture represent not what actually is, but what a man conceives to be. Most of the published discussions of this subject do not sufficiently emphasise this fact. We are told, for instance, that good and God must receive upward gestures, and bad and the Devil downward gestures. But this depends entirely upon one's point of view, upon one's conception. The expression, "Get thee behind me, Satan," would require a downward and backward gesture, because the speaker would conceive of Satan as below and behind himself morally; but the expression—

> There was a Brutus once that would have brooked
> The Eternal Devil to keep his state in Rome
> As easily as a king—
>
> *Julius Cæsar*, i., 2 *Shakespeare.*

would require an upward and forward gesture; because in it Satan is conceived of as a foe of overwhelming force, whom one is facing, therefore, as one physically above and before the speaker, and not by any means below or behind him.

Now let us consider the shapes assumed by the hand in the place where the gesture is struck. There may be said to be three of these shapes, namely, that of the fist, of the finger, and of the exposed palm. These all seem to interpret the gesture mentally by adding significance to its mode of emphasis. We shall find that they represent,

233 FIG. 37.—THE DEATH OF ANANIAS.—Cartoon by Raphael.

See pages 169, 193, 234, 236, 240, 243, 251 284, 290, 316, 317.

respectively, vital or physical, mental or interpretive, and motive or emotive emphasis.

Of the truth of these statements there can be no doubt in the mind of one who thinks of them. All must recognise that the fist, the broadest, *roundest* form that the hand can assume, represents, as nearly as any shape possible for it, vital and physical emphasis, *i. e.*, will-power applied to the impression of ideas. Just as a fist threatens with a power greater than one's own, if held above one's head ; and with one's own power, if held on a level with one's breast, so it manifests strength of conviction and a determination to pound the truth into an opponent, if made in connection with a downward gesture of emphasis.

Equally evident is the meaning of the pointing finger. It is the *sharpest* form that the hand can assume, and, according to what has been said, should represent interpretive mentality. This it undoubtedly does. When we point to an object, we do so not as an exhibition of will or emotion, but of thought. Nor do we wish others to do anything beyond concentrating their thought upon it. This is certainly true of the finger gesture wherever used descriptively, whether it point downward (see two figures in Fig. 36, page 231), upward (see one figure in Fig. 37, page 233), or to one side (see Fig. 38, page 235). This is true even when made with all but the forefinger clinched into an unmistakable fist; though the fist causes the gesture to stigmatise and denounce with a decidedly physical and forcible effect. When used as a gesture of emphasis, too, the finger is interpretive. It directs attention to the small, delicate, and subtle points of conceptions, arguments, or series of facts upon which the speaker wishes to concentrate not the energies or emotions of himself,

or his audience, but their powers of analytic thought. In Fig. 39, below, the finger on the chin indicates that the man is analysing in order to understand exactly what course of action his will—represented by his chin—is to choose or reject.

Last of all, we have the gesture with the fingers and thumb unfolded from the palm, and displaying all their

FIG. 38.—SIDEWARD FINGER GESTURE.
See pages 234, 237.

FIG. 39.—REFLECTION.
See pages 235, 241.

length. According to the principles on page 228 this shape ought to represent the motive or emotive attitude. The moment that we examine closely the way in which the gesture is used, we cannot doubt that this is precisely what it does represent. There are two forms of it, namely, the *closing*, in which the palm is averted, *i. e.*, turned away from the body, where the speaker cannot see it, as in Fig. 40, page 236, and the *opening*, in which the position is reversed, where the palm is held so that the speaker can see it, as in Fig. 41, page 236. The *closing* gesture

seems to push downward, upward, backward, forward, or sideward, as if to keep all external things or thoughts from touching or influencing the one who is gesturing. It seems to *close* all channels of communication between him and the outside world. Notice how the left hand of the Christ in Fig. 36, page 231 seems to separate him from the woman before him. The *opening* gesture seems prepared to give and receive things or thoughts from every quarter; and thus to *open* these channels. Notice the right hand of the Christ in the same Fig. 36, page 231. Both gestures, therefore, seem to represent the motive or emotive attitude. To extend what has been said, the *closing* gesture being used to reject, to ward off, to deny, what is unpleasant, threatening, or untruthful (notice several gestures in Fig. 37, page 233), is used descriptively to refer to anything having these characteristics, to anything, therefore, like a storm, an avalanche, a disgusting sight, a foe, or any supposed source of plotting or hostility (see Fig. 42, page 237). For an analogous reason, as applied to abstract thought, this gesture is used by one who is in a mood to dogmatise, to dictate, or to express any conception, concerning which he is not in a condition to receive suggestion from others. It indicates, therefore, everything which one

FIG. 40.—DOWNWARD CLOSING GESTURE.
See page 235,

FIG. 41.—DOWNWARD OPENING GESTURE.
See pages 235, 238.

does not care to submit to others as an open question, a question left for them to decide. In accordance with what was said in the last paragraph, it *closes* the channel of influence, as exerted by others, and seems to say, simply: "This is my opinion. I hold it irrespective of anything that you may hold." Derived from this expressional use of the gesture, is a secondary descriptive use of it, according to which it is made to refer to anything which the mind cannot conceive to be an *open* question for others to think of as they choose, therefore to anything which, if thought of at all, must be thought of in only one way. Thus "impending fate," or "the laws controlling the universe," would be indicated by high *closing* gestures. *Closing* gestures, too, would be used when referring to any object that to the mind's eye has definite outlines, like a cliff, or a house. If objects like this be small, the finger usually points to them, but the youngest child never points with the palm up to things that have definite outlines. The palm is always down. It is not an *open* question how one shall conceive of a particular horse or dog; and so the *closing* gesture with the index finger shuts out all appeal. The mind of the speaker cannot be satisfied unless the hearer conceives of these objects just as he does (Fig. 38, page 235).

FIG. 42.—BALANCED BACKWARD MOVEMENT WITH CLOSING GESTURE.

See pages 236, 292.

The *opening* gesture indicates exactly the opposite. Being used to welcome or impart what is pleasant, interesting, or important, it naturally refers, in a descriptive way, to any thing or thought having these characteristics,

to anything conceived of, therefore, as being freely given (see the man in Fig. 43, page 238), or received like a gift or purchase, or like friendship, joy, knowledge, prosperity, or blessedness. As accompanying an expression of abstract thought, this gesture is in place whenever one submits an opinion as an *open* question for others to consider and to decide as they may deem fit. It is the gesture, therefore, of inquiry, persuasion, and appeal (Fig. 41, page 236). "They should be put to death," uttered with the *closing* gesture, means: "This is my opinion, and I hold it irrespective of anything that you may think about it." The same words, uttered with the *opening* gesture mean: "This is my opinion; do you not, should you not, in view of all the arguments that I have used, agree with me?" Derived from this expressional use of the *opening* gesture, is a secondary descriptive use of it, causing it to refer to anything of a doubtful and indefinite nature, which it is an *open* question for others to think of as they choose. It would be used in mentioning a "smiling country" and a

FIG. 43.—PROPOSITION OF MARRIAGE. D. CHODOWECKI.

See pages 238, 239, 243.

"sunny landscape." In conceiving of these, the speaker does not have in mind, nor does he wish the hearer to have in mind, any fixed or definite object. Imagination can fill in the outlines as it chooses, and the gesture indicates this fact. So "liberty," "progress," and "blessedness" receive the high *opening* gesture, partly because they are always welcome, yet partly, too, because the results of them may manifest any one of a thousand different effects, which the mind of the listener is left free to conjure according to his fancy (Fig. 44, page 239). The benediction after religious services in church, as given with the *closing* gesture, corresponding to the position in Fig. 45, page 239, is ritualistic. It imparts constraining grace. As given with the *opening* gesture, corresponding to the position in Fig. 44, page 239, it is evangelical. It solicits inspiring grace. So the hand of the woman accepting the offer of marriage in Fig. 43, page 238, not only indicates embarrassment through angularity of elbow and wrist; it also imparts, without intention, the information that she is the one who will not yield, but will rule and dictate when the wedding has been consummated. The pointing finger, too, when the palm is in the position of an *opening* gesture, does not mean the same as when it is in the position of the *closing* gesture. In the former case it does not

FIG. 44.—UPWARD OPENING GESTURE. See pages 239, 243

FIG. 45.—UPWARD CLOSING GESTURE. See pages 239, 242 292.

point merely to definite objects; it points to open possibilities. What is uppermost in the mind of the first man at the left of the Christ in Fig. 36, page 231, is to ask a question, "What shall be done in view of that to which I point?" What is uppermost in the mind of the man pointing upward at the right of Fig. 37, page 233, is to indicate a source from which one can receive inspiration; and he is beckoning—asking others to consider it. The motive is thus that of the *opening* gesture.

A few sentences more will embody all that needs to be added with reference to the meanings of the movements of the hand while being conveyed by the arm to the place towards which the gesture is aimed. All these movements, of course, as follows from what has been said, whether suggesting forms of curves, straight lines, or angles, give expression, in a general way, to the motive or emotive nature; the degrees of vitality entering into this being best indicated by the action of the shoulders; the degrees of interpretive intent, by the adjustments of the wrist and the hand and fingers below it; and the degrees of the operating motive pure and simple by the action of the elbows. Notice that a hint is usually conveyed by their nudge.

These movements, moreover, by which are meant now, those that are preparatory to the gesture, irrespective of the place to which the hand is conveyed, may be made with a general direction away from the body, toward the body, or both away from it and also toward it. When used descriptively, they refer, respectively, to other things than self, to self, or to both; *i. e.*, to the relations between other things and self. Used mainly for emphasis, the hands, when moving away from the body, represent a full, unembarrassed, and, in this sense, instinctive expression

of the actuating motive. They indicate, like the falling inflection of the voice, that the mind has come to a positive and decisive conclusion. When the hands move toward the body, the gestures are reflective; they represent something in thought that checks the expression of the motive, something physical in phase, if they end near the abdomen (Fig. 46, page 241), mental if near the head (Fig. 39, page 235), and emotional or moral if near the heart (Fig. 36, page 231); they indicate, like the rising inflec-

FIG. 46.—AN ATTACK.
See pages 241, 243.

FIG. 47.—BOY SURPRISED.
See pages 241, 242, 243.

tion of the voice, that the mind is thinking, but has come to no conclusion; that it is asking a question; that it is influenced by doubt, perhaps, or surprise (notice the representation of this in Fig. 47, page 241); the mood is, at least, anticipative and indecisive. When the hands move both from the body and also toward it as in Fig. 47, or, as is the case in the most common emphatic oratorical gesture, both toward it and from it, they represent a combination of the two conceptions already mentioned. The effect then is exactly parallel to that of the double

meaning in the circumflex inflection (see the author's "Orator's Manual," pp. 56 to 59). If the gestures begin with the movement toward the body, this indicates that the man has asked a question; and if they end with the movement away from it, that then in his own mind, as a result of deliberate and careful consideration of arguments *pro* and *con*, he has answered the question. The first direction shows that there has been indecision, the second that he has come to a conclusion; the first that he has investigated, the second that he has reached a definite result. The suggestion of both facts in this gesture causes it to convey an impression of breadth of thought as well as of intensity.

If the order of the movements be reversed, as often in dramatic gestures (Fig. 47, page 241), of course their meaning is reversed. But whatever be their order, it is evident that movements preparatory to starting the final stroke of a gesture, in the degree in which they are continued through a long time or cover a large space, enhance the representative effect, inasmuch as they indicate thus the degree in which the mind has reached the opinions which it expresses as a result of weighing the possibilities both in favour of them and against them.

So much with reference to the *direction* of the movements. A few words more now with reference to their *character*. Concerning this a little observation will reveal that movements which are spontaneous and unconscious, because uninfluenced or unimpeded by interruptions that come from without, all tend to assume the forms of free, large, graceful curves. See Figs. 9, page 97; 23, page 170; 26, page 217; 45, page 239; 54, page 289. But in the degree in which a man's expression is a result of mental calculation, made to meet emergencies from without, especially

in the degree in which these conditions check, impede, and embarrass him, and make him conscious of this fact, or self-conscious, as we say,—his bearing is stiff, constrained, and awkward, imparting to all his movements a tendency to assume the forms of straight lines and angles. See the woman in Fig. 43, page 238; also the positions in Fig. 37, page 233. But sharp angles and short curves will give way to straighter lines and longer curves in the degree in which outside conditions do not wholly overcome one's spontaneity, as in exerting the moral influence of confident assertion (Fig. 23, page 170), or enthusiastic persuasion (Fig. 44, page 239). But in the degree in which he is conscious of opposition, whether this be mental, as in Fig. 18, page 122, or material, as in Fig. 47, page 241, or both together, as in the two figures at the front of Fig. 37, page 233, or as in fighting (Fig. 46, page 241), this consciousness will double up his frame and throw his neck, elbows, knees, and hips into shapes that will make his form the best possible representation of what can be described by only the term angularity; yet from this appearance in such cases curves are never entirely absent.

So much for the meanings of outlines, whether produced by the hand or assumed by the body. Now let us notice their meanings as manifested not in the human form but in the inanimate appearances of nature surrounding it. The curve has been ascribed to the physically normal action of the human form. Is there any truth in the supposition that the same in natural scenery may be ascribed to physically normal action? Why should there not be? The eye itself is circular, and the field of vision which it views, at any one moment, always appears to be circular. So does the horizon and the zenith, and so, too, do most of the objects that they contain—the heaving

hill, the rising smoke or vapour, the rolling wave, the gushing fountain, the rippling stream, even the bubbles of its water and the pebbles of its channel, and every tree, plant, and animal, whether at rest or in motion. For this reason, curves, wherever seen, necessarily suggest more or less of that which is normal. See the forms at the right of Fig. 48, page 245.

The straight line with its accompanying angles we have found to be produced by a man chiefly as a result of mental action. How is it with similar effects in the appearances surrounding him? Do not rectangles with their straight, parallel sides and necessitated angles, as in buildings and in so many other objects made by a man, invariably suggest results of his constructive, and, therefore, of his mental action? Nor are such suggestions confined to objects revealing that a man has really interfered with the action of nature. By way of association, the horizontal hilltop, the sharply perpendicular cliff, the pointed peak, cause us to think and often to say that they look precisely as if a man had been at work upon them, levelling or blasting. Few natural objects have outlines absolutely straight or angular. For this reason, in the degree in which they are so, the impression naturally produced by curves, which is that of a growth outward from normal vitality within, is lessened. We feel that life has in some way been literally blasted. See the forms at the left of Fig. 48, page 245. As a rule, it is the great convulsions of nature, whether produced by fire, frost, wind, or earthquake, that leave behind them, if their progress can be traced at all, such results of crystallising, cracking, and rending as are manifested in outlines of this character. Again, when lines drawn by men are broken, and also curved and crossed, they necessarily suggest

FIG. 48.—TISSINGTON SPIRES, ENGLAND.

See pages 244 and 246.

the complex. Because complex, they are perplexing; and provided they be nevertheless disposed in such ways as to render the fact of some design indisputable, they are exciting, as far as lines can be, to the imagination, constantly stimulating it, as they do, to solve the mystery of their mode of arrangement. Such being their effects, one would expect to find the natural forms characterised by them proving more exciting to the emotions than those already considered. And when we examine the appearances about us, is not this exactly what we do find? Is it not when complicated curves and angles outline natural trifles that they fascinate and make men imitate them in their curios? Is it not when curves, straight lines, and angles join in natural forms of grander import, when the tree and bush are wreathed about the precipice, when the dome-like mountain and the rolling cloud lift above the sharp peak and the cloven crag, and far below them lies the flat plain or the lake,—is it not then, in connection with such combinations, that the most exciting appeal is made through the emotions to the imagination? See Fig. 48, page 245.

A good way, perhaps, of discovering the representative capabilities of these different appearances, is to recall the use that is made of them by the landscape gardener. Is it not a fact, in case he desire to direct attention to the beauty of nature in itself, *i. e.*, to the capabilities of nature with the least possible suggestion of the intervention of a human mind,—that in this case his plans will develop into gradually rising mounds and circuitous drives, winding among trees and shrubs planted in clusters but not in rows? On the contrary, if he desire to produce a distinctly different impression, causing thought to revert from nature to man, either to the artist who has

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FIG. 49.—REPOSE IN LANDSCAPE AND FIGURE. W. CRANE.

See page 248.

arranged things as they are, or to the resident or visitor for whose convenience or guidance they have been so arranged, then will he not plan for distinctly different effects, as in the long avenue bordered with its rows of trees, or in the terrace, or the hedge, or the flower garden with straight and rectangular pathways? Or, once more, if he desire to produce more emotional impressions by means of which the observers may be drawn more into sympathy with his designs and the ingenuity of them, will he not make more use of variety and contrast, combining the winding walks of the ramble with sharp angles, perpendicular rocks with rounded moss banks, or shooting cataracts with still pools?

Is it strange that similar principles should apply to painting and sculpture? Charles Blanc, in his "Grammar of Painting and Engraving," translated by K. N. Doggett, says: "In the choice of the great lines, a certain character should be dominant. . . . Straight or curved, horizontal or vertical, parallel or divergent, all the lines have a secret relation to the sentiment." John Ruskin, too, recalling several instances in which prominent features of certain of Turner's pictures are arranged along a framework of curved lines, speaks of these as being the ones most frequently found in nature. "In the spectacles of the world," says Charles Blanc, in the work just quoted, "as in the human figure, in painting, or in architecture, the straight lines correspond to a sentiment of austerity and force, and give to a composition in which they are repeated, a grave, imposing, rigid aspect." (See Fig. 49, page 247.) "Witness 'The Testament of Eudamidas.' In it, Poussin has repeated the horizontal lines. Lying upon his death-bed the citizen of Corinth forms the dominant line of the arrangement. The lance of the hero repeats

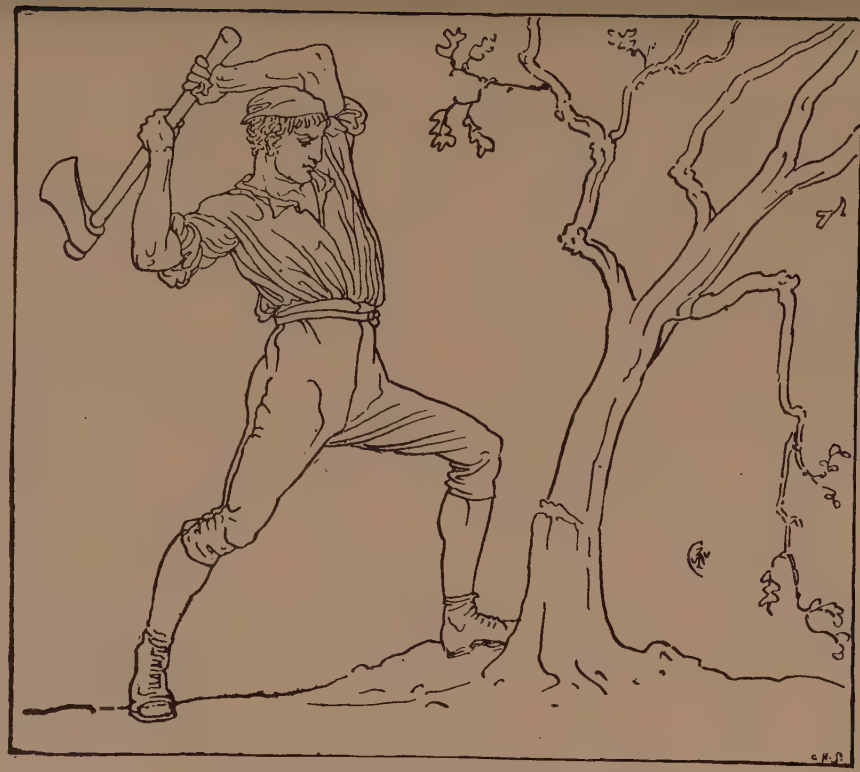


FIG. 50.—LINES ILLUSTRATIVE OF ACTION. W. CRANE.

See page 250.

this line, and, prostrate like him, seems condemned to the repose of his master, and to affirm a second time his death." Again referring to the vertical lines, he says: "Look now at 'The Life of Saint Bruno,' by Lesueur. . . . The solemnity of the religious sentiment, which is an ascending aspiration, is expressed in it by the dominant repetition and parallelism of the verticals." Once more, in language applying accurately to only what we have here termed mixed lines, consisting of both curves and angles, though often angularity alone is attributed to them, he says: "If it be necessary to represent a terrible idea,—for instance that of the last judgment, . . . such subjects demand lines vehement, impetuous, and moving. Michael Angelo covers the wall of the Sistine chapel with contrasting and flamboyant lines. Poussin torments and twists his in the pictures of 'Pyrrhus Saved' and 'The Sabines,' and the linear modes employed by these masters are examples of the law to be followed."

"In the ancient Greek sculptures," says Long in his "Art, its Laws and the Reasons for Them," "a correspondence between the disposition of the figure and the sentiment of the subject will always be found, . . . Minerva's position being perpendicular and her drapery descending in long uninterrupted lines, while a thousand amorous curves embrace the limbs of Flora and Venus;—the plain, the simple, the dignified, and the intellectual being the sentiment of the one; the light, the gay, and the sensual the sentiment of the other. And if the sentiment which animates them be of a very exciting and passionate character, the movements become more quick, and the forms more angularised." (See Fig. 50, page 249.) "It is in obedience to this principle," he goes on to say, "that Raphael acted when, in his cartoon of 'The Delivery of

the Keys to St. Peter,' he employed, as did the sculptor of Minerva, the influence of *simple* forms," *i. e.*, simple as distinguished from mixed, "to express and produce the sentiment of the character introduced and the natural effects of that scene; and the same, too, in the 'Ananias' [see Fig. 37, page 233] among the figures distributing and receiving alms, whilst, in obedience to this rule, he has resorted to the adverse system of angular forms and abrupt contrasts," *i. e.*, to mixed lines, curved and straight, "to portray distress and convulsion in the dying man, and astonishment and dismay in the figures that immediately surround him."

Simple imitation, even aside from any desire to represent, will usually cause a close observer to regard these principles when depicting natural scenery or human figures; but they are equally applicable when constructing buildings. The most ordinarily accepted classification made of the different styles of these is according to their bridging of openings or spaces by straight lines, curves, or angles, which three methods are supposed to indicate the differences between the architecture of the Greek horizontal entablature, of the Byzantine or Romanesque round arch, and of the Gothic pointed arch. But notice that straight lines abound in all these forms, the horizontal ones in Greek architecture (Fig. 28, page 219) being no more prominent than the vertical ones in Gothic architecture (Fig. 33, page 226). It is well to observe, however, that of all architecture appealing to the emotions the latter does this in the most powerfully effective way. The reason for this, not often noticed, is that in the Gothic alone is it possible to blend all the possibilities of outline. Sometimes there are no apparently curved forms at all in Greek buildings (see Fig. 28, page 219). Sometimes, too, there

are no sharp forms in Byzantine or the allied Romanesque buildings (see Fig. 34, page 227). But in Gothic buildings there is invariably a blending of both. Moreover, as if also to emphasise the existence of both, each form is developed to excess, the curves being made particularly round and the angles particularly sharp (see Fig. 33, page 226). Now, to apply the principles that we have been considering: if, in architecture, the predominating lines be horizontal, is it not true that, combined with the seriousness and dignity suggested by straight lines, they also represent repose? (See Fig. 28, page 219, and Fig. 21, page 127.) Is it not true, also, that curved architectural forms represent that which is simple and graceful, because natural? The stone arch and the arching ceiling certainly may remind us of natural methods of support in a sense not true of objects wholly flat or angular; nor are many constructions natural to beasts, birds, or insects, of the latter character. Is it not true, too, that when the curve in ceiling or dome is used in connection with straight lines that emphasise verticality, we have suggestions, combined with seriousness and dignity of effect, of that highest phase of grace represented in elevation and aspiration of soul? See Fig. 51, page 266, and Fig. 79, page 354. Finally when we look at a Gothic building in which, as in Fig. 33, page 226, curves, angles, and straight lines are used in excess of what are needed, and many are shaped alike evidently for the purpose of ornament alone, and to enhance, by way of correspondence, the appearance of artistic unity, then is it not true that the forms represent a special appeal to the æsthetic emotions. "See how Sir Walter Scott," says Ruskin in his "Lectures on Architecture and Art," "cannot even get through a description of Highland scenery without helps from the idea:

'Each purple peak, each flinty spire
Was bathed in floods of living fire.'

That strange and thrilling interest with which such words strike you as are in any wise connected with Gothic architecture, as, for instance, vault, arch, spire, pinnacle, battlement, porch, and myriads of such others—words everlastingly poetical and powerful wherever they occur,—is a most true and certain index that the things themselves are delightful to you, and will ever continue to be so."

For the reason suggested on page 214 that which, in the arts of sight, corresponds to quality in the arts of sound, is undoubtedly *colour*, interpreted in that broad sense in which it includes not only the hues used in painting, but the white or neutral tints characterising the effects of statues or buildings. Let us notice now the representative possibilities of colour. We can best come to understand these by considering what colour represents in extreme cases. When there is no light there is no colour. When there is little light, we can see forms, but not colours, except as they seem to be very dim and dark. In this condition, the mind is not greatly interested in them nor aroused to thought by them; so far as they affect the appearance of nature, they are not, as a rule, satisfactory, interesting, cheering, or inspiring, but, on the contrary, they sometimes cause depression and even solicitude. With more light, however, the outlines and colours become more visible, bright, and varied; and not only the satisfaction but the excitation derivable from them is increased? These effects continue to be enhanced up to the time, if it ever arrive, when the colours are no longer distinguishable, for the reason that the light has become too dazzling. But at this point the disagreeableness of the effect is produced, not because

attention is aroused too slightly, but too greatly, as, for instance, by the direct rays of the sun or by a flash of lightning. In all cases, however, even in these last, notice the additional excitation to the emotions produced by variety. Sunlight or lightning is never so vivid as when made to contrast sharply with absolute darkness, as in a cave or a cloud. Nor is a bright red or yellow ever so effective as when placed directly against a dull blue-green or indigo. We may say, therefore, that, as a rule, *dark* colours or shades of them which result when the colours, as determined by the spectrum, are mixed with black, as also *unvarying* colours, are less exciting to the emotions than bright and varied ones.

Before illustrating these statements, let us notice another fact. When, in a screen shutting out the light from a darkened room, we make a narrow slit, and through this allow the light to enter, and, receiving this light on a prism, separate the one ray of light into various partial rays of the same, all the colours of the spectrum will appear, placed one after another, on a white wall opposite the window. But the red colour will appear nearest the place on which the white light would have fallen, had we used no prism, and farther and farther from this place, will appear, respectively in this order, orange, yellow, green, blue, and bluish purple. For this reason the first three of these colours—red, orange, and yellow,—because, as some say, more nearly allied to light as well as to the fire and heat naturally associated with the source of light, are termed bright or warm; and the last three—green, blue, and purple—are termed dark or cold. The use of the terms *bright* and *dark* shows the close connection between light and darkness as influencing not only the *degrees* of colour, of which mention was made in the preceding

paragraph, but also the *kinds* of colour; and the use of the terms *warm* and *cold* show the subtle connection between the effects of temperature and of colour of which mention was made on page 214.

For the purpose not merely of indicating the unity of method in different parts of this system, but also for the purpose of accomplishing that for which this unity of method is intended to be serviceable, it seems well in this place to try to interpret the meanings of the *colours* through what we know (see pages 205 and 206) of the meanings of the different elocutionary, musical, or poetic *tones*. Of these tones, the *normal* and *orotund* are musical and unmixed. It will be shown presently that the two, respectively, correspond to the *cold* and the *warm* colours. The aspirate—*i. e.*, the whisper—is an absence of tone. This seems to correspond, when unpleasant in its effects, to an absence of colour as in *black*, and, when pleasant, to its absence as in *white*. The *pectoral* and *guttural* tones are always mixed, sometimes with different qualities of musical tone, and always with more or less of the *hostile aspirate*. For reasons to be given presently, this fact is sufficient to suggest a correspondence between the *pectoral* and the *cold* colours when *mixed with black*, and between the *guttural* and the *warm* colours when *mixed with black*.

We will take up, first, the distinction between the *normal*—sometimes called the *pure*—tone and the *orotund*. In elocution, the former is not necessarily a cultivated tone, but the latter, the orotund, is. The former therefore suggests the natural, and the latter the artistic. Is not the same true with reference to the classes of colour to which these have been said to correspond? Just as the normal tone is that of ordinary natural intercourse,

are not the cold colours, the greens, blues, and purples, those of ordinary natural life? Is it not true that for nine-tenths of all the time, nine-tenths of all the surfaces of the globe—*i. e.*, the lakes, skies, hills, forests, fields, rocks, distant and near—are robed in these colours? The warmer colours, the reds, oranges, and yellows, appear occasionally in nature in the sunset sky, the autumn foliage, the hues of flowers, the plumage of birds, and the coating of animals; but it is remarkable how seldom they appear at all, how little surface, comparatively, they cover when they do appear, how infrequently they appear in their full intensity, and how universally, when they do appear in this, they are considered exceptional and worthy of remark. They certainly are not nature's normal colours. Man cannot dye anything bluer or greener than he can often see in the sea and sky and forest; but nowhere in the world can he raise a red or orange flag that will not instantly be recognised as something different from anything in nature, and, therefore, as something that is signalling the presence of man. Hence the use of these colours, especially of red, by surveying parties, and on railways, piers, and battle-fields. Such colours are the ones that are most suggestive of human interference. As used in art, therefore, they are the colours representing the condition upon which the thought and feeling of the artist have had the greatest influence,

With these facts, however, we need also to bear in mind that which is a logical inference from what was said on page 254, namely, that all very low and uniform shades, even if of yellows, oranges, and reds, have a quieting effect, and all very high and—because contrasts emphasise one another, and most contrasts of cold colours are warm[1]

[1] Red or orange of green or blue. See pages 283 and 370.

—all contrasting tints, even if of purples, blues, and greens, have an exciting effect. To compare these conditions with those of pitch in elocution and music, this, if low and monotonous, indicates what is *serious*, *grave*, *dignified*, and *self-controlled*, and, if high and varied, the opposite. Does it require an argument to show how perfectly these analogies are carried out as applied to colours? Do we not all recognise the more exciting and exhilarating effects of these when full of brightness, and also, in connection with this, of contrast? Who has not noticed the difference in influence between a lawn and a flower-bed? or between a room decorated with evergreens and the same decorated with chrysanthemums? or between a uniformly clouded gray sky, and a sky lighted up with the diversified glories of tne sunset? or between the dulness and monotony of a business street when the shop-entrances are hung with dingy clothing for sale, or the sidewalks filled with people in dark business suits, and the same streets when hung with bright and varied flags on a gala day, or crowded with throngs decked out in the gay and checkered trappings of a carnival or holiday parade? Of course, uniformity of colour, like uniformity of outline—as in parallelism,—produces a certain seriousness and dignity of effect; and any procession, the members of which are dressed alike and march alike, will produce something of these irrespective of the quality of the colouring. But there is a vast difference between the degree of seriousness and dignity in the effect of a procession of priests and nuns robed in black or gray in a funeral or at church, and in that of militia uniformed in bright colours on a holiday or in a theatre. In the latter case, it is impossible to conceive that any child, or a crowd of any kind, should require explanations, aside from those suggested by colour

alone, to arouse them to excitement and enthusiasm. There was philosophy as well as fancy, therefore, underlying the former use of red in the costumes of soldiers. Nothing in the way of colour can surpass red in effectiveness. This fact has been explained according to the principle of association. It has been said that red is the colour of blood and of fire, and suggests them. But does it suggest them to the bull and other animals whom it excites to fury? In these cases does it not act physically? Physicists agree that there is no colour that agitates the optic nerve so violently. There seem to be, therefore, just as in the case of outlines, principles both of association and of nature which cause certain colours, and, to a less degree, all colours, when at their brightest, to be representative of emotive excitation, and certain other colours, and, to a less degree, all colours in their lower tones, to be representative of the opposite.

All the great facts of nature are felt long before they are formulated. When the man born blind expressed his conception of the colour red by saying that it was like the sound of a trumpet, he uttered not a poetic but a literal truth. Just as red is the colour that is farthest removed from the ordinary colours of nature, the blast of the trumpet is the sound that is farthest removed from the ordinary sounds of nature. All pastoral symphonies abound in passages executed by the flutes and clarionets, and the violins and other stringed instruments. With the music produced by these, it seems natural to associate the sounds produced by the sighing and whistling of the wind, the rushing and dashing of the waters, and the occasional piping of a bird and the lowing of an animal. The drum and cymbal, too, may remind one of the exceptional thunder of the storm, or the roll of the earthquake. But when the

flutes and stringed instruments give way to the trumpet and allied instruments, then we feel that man is asserting his influence in the scene, and we listen, almost instinctively, for the sound of his tramping feet. It is only man that marches. It is only man that wages war, and it is only in martial music and in the expression of the passion of conflict and the pride of triumph that the blasts of the trumpet, announcing, as they do, more distinctively than any other musical sounds, the power and presence of the human being, realise to the full their representative mission. No wonder that even a blind man, at the end of the play, just as the curtain drops on the victorious conquerors, should be able to imagine how there should be an æsthetic connection between the brilliant climax that is heard and the brilliant colours in the costumes and flags which are described to him as surrounding these conquerors and waving above them.

The same principles must apply, of course, to the significance of colour as used in painting and architecture. In the ordinary portraits of great men, in such paintings as Raphael's "School of Athens" (Fig. 22, page 167), in which we find grouped together the celebrated characters of many periods, or in a representation of solemnities like that in Jules Breton's "First Communion," the seriousness and dignity of the subjects are such that we do not feel the need in the pigments of much brightness or contrast. But whenever anything is intended to produce, primarily, a powerful impression, whether gay or grave in tendency, the contrary is sometimes true. Hence one reason why Rubens with his high and varied colouring is so transcendently great in such representations of profound excitement as in the "Lion Hunt" and "The Crucifixion" which is in the gallery at Antwerp, or in

"The Descent from the Cross" (Fig. 1, frontispiece), and is so correspondingly gross in subjects of a lighter character, as in some of those in the Old Pinakothek at Munich.

But there is another reason for this fact, and, in connection with it, there is another confirmation of the general truth of the statements just made. It may be recognised by noticing the effects produced by colours upon pictures of the human countenance. So far as this latter is more than a mass of lifeless flesh, so far as it is something fitted to be transfused and transfigured by the seriousness of intelligence and the dignity of spirituality, is there any doubt that it should be represented in colours neither very brilliant nor greatly varied? May there not be a sense in which it is a literal fact that the blue veins of the aristocrat are far more suggestive of sentiment and soul behind them, not only than the bloated flush of the inebriate, but even than the ruddy hues of the peasant? Compare even the "Beggar Boys" of Murillo, or his ordinary women, with the flaming flesh blistering on the limbs of some of Rubens's figures. Not alone the angular curves that often form the outlines of these latter, but the colouring, too, causes all the difference in delicacy, refinement, and tenderness of sentiment between them and the former, that one might expect to find between the ideal of a scholar and of a scavenger.

So, too, in sculpture. Is it not universally recognised that statues of dark gray, blue, or black marble, granite, or bronze, as in the case of some of the Egyptian remains, while fitted for subjects presented in proportions sufficiently large to secure great seriousness and dignity of effect, are much less appropriate than pure white marble for subjects of the same general character when presented in the proportions of life? And is it not equally true

that subjects of a lighter character and smaller size are far more appropriately represented in the warmer-coloured bronzes?

In architecture, outline has usually more to do with effects than has colour. Yet here, too, few fail to recognise the influence of the latter. Who can be insensible to the congruity between the seriousness, gravity, and dignity of impression produced by blue shades of gray or even of white, as they loom before us in the outlines of the cathedral, as in Figs. 25, page 216, and 33, page 226, or of the large public edifice, as in Fig. 79, page 354? But who finds it agreeable to have the same conceptions associated with buildings designed for domestic purposes? Observe how cold, as we very appropriately say, and therefore how devoid of that which is homelike and inviting, is the impression sometimes produced by the blue-gray or white of a mansion, as contrasted with the appearance of a house constructed of material in which there is a more liberal admixture of the warm hues, as in stone or brick of a yellow, orange, or brown shade. And what of the warm colours when used with contrasts? Is there any one who is not conscious of the joyous, gay, and exhilarating suggestions imparted by the bright and varied tints that invite one to the pavilion of the park or the veranda of the seaside cottage? The same principle, of course, is exemplified in interiors. Cold colours on the walls, an exclusive or excessive use of blue, or of green, will always affect the sensitive like the clouds of a lowery day, while the warmer colours, used either wholly or in part, will correspondingly enliven them. No one can deny the impressiveness of the gray of the stone arches that bend over the "dim religious light" of the church. But even the effect of this needs to be counteracted by

warm colours in the chancel; and would be wholly out of place in a theatre.

There is another effect of these cold, as contrasted with warm, colours, which, perhaps, should be mentioned here. Owing to the degree of light that is necessary for the production of the warmer colours, it is only when objects are near at hand and therefore are in very strong light that, as a rule, we perceive these colours at all. At a distance, as exemplified in the blue of mountain ranges, everything is robed in the cold colours. For this reason, it is held that, in painting, the warm colours, with their compounds and admixtures, have the effect of causing objects to seem to be at the front of a picture, and the cold colours of making them seem to be at the rear. We know that in linear perspective the farther off objects are, the smaller they appear. In aërial perspective, the farther off they are, the more dim, or blue, or purple, or gray they appear (see Fig. 2, page 3). A careful regard of this rule may sometimes enable the painter not only of landscapes but also of figures to produce very striking effects. An illustration of this has been noticed in "The Scourging of Christ" by Titian, the greatest of the older colourists, in which a figure, necessarily placed in the front of the picture, is painted in gray armour in order not to distract attention from the Christ himself, who, though in the rear of this, is thrust into prominence by the red colouring of his robe. A similar effect, in fact, is a result wherever this latter colour is introduced.

As applied to architecture, it is evident that, aside from the effects of form, which in certain cases may entirely counterbalance those of colour, the colder the colour, the more massive, as a rule, will appear not only the building itself but also the grounds about it; the effect of the cold

colour being to make the house and its parts seem at a greater distance from the observer, and, therefore, greater in size than it would be at the supposed distance. Hence, another reason for using cold colours in grand buildings. The same principle applies to the painting and the papering of an interior. The warm colours cause an apartment to seem smaller and more cosy, and the cold colours exactly the opposite. Therefore for ceilings, especially of public halls and churches, blue is rightly popular. Thus used it suggests largeness and elevation, as in the sky which it seems to resemble; and it also furnishes, as a rule, an agreeable contrast to the warmer colours appropriate for the walls.

Now let us consider the mixed as distinguished from the unmixed colours. Going back, for a moment, to mixed tones, the first of them that was mentioned was the aspirate. This, as was said, is a whisper, and its characteristic is an absence of any tone whatever. Of course, that which, in the realm of colour, corresponds to an absence of tone must be, according to its degree of intensity, black or white, or else some gray quality formed by mixing the two. The whisper, in its forcible form, the analogue of which, in the realm of sight, would be black, indicates apprehension, as in fright; and in its weaker form, the analogue of which, in the realm of sight, would be white, indicates interest, as in the secrecy of a love-scene. In both forms the whisper adds feeling to the tone, which, as a rule, is usually uttered, if not simultaneously with it, at least before or after it. This tone, of course, considered irrespective of the whisper that is joined with it, must resemble either the normal or the orotund. If it resemble the normal, the forcible whisper causes it to have that passive effect of apprehension

characterising the expressions of *awe* and *horror* represented in the mixed quality which is termed pectoral. If the tone resemble the orotund, the forcible whisper causes it to have that active effect of apprehension characterising the expression of *hostility* represented in the mixed quality which is termed guttural.

In the realm of sight, nothing could be perceived if everything were absolutely black. Black, therefore, as well as white, must always be blended with other shades of colour. When blended thus, the effect of being side by side with a colour is often the same as of actual mixture. At a slight distance, we cannot tell whether the appearance is owing to the latter or merely to the fact that two shades happen to be near together. Now bearing this in mind we may say that the effect of black, when blended with the cold colours, corresponds to that of pectoral quality, and, when blended with the warm colours, corresponds to that of guttural quality.

Notice, first, the combinations of black with the cold colours. In such cases the black, of course, must be quite prominent, and, merely to render the objects depicted clearly perceptible, it must be offset in some places by cold colours of comparatively light tints. But where light tints are blended with absolute black there must be some violent contrasts. Violent contrasts of themselves, as shown on page 254, represent excitation. Excitation, however, in connection with blackness, — to go back to what was said, on page 253, of the effects of light from which we have developed those of pigments, — is excitation in connection with more or less indistinctness causing perplexity and involving apprehension. At the same time, as this apprehensive excitation is connected with the cold colours, it is passive, or, as one might say, chilling

and benumbing, rather than active, or, as one might say, heating and inflaming. For this reason the effects seem appropriately compared to those of *awe* and *horror* represented by the pectoral quality. Of course, colour alone, without other means of expression, can only approximate a representation of these; but let the outlines justify it, and what hues, mixed with those of the countenance, can make it so ghastly as dark blue and green; or can make the clouds of heaven so unheavenly as very dark blue; or the sod of the earth so unearthly as dark blue-green; or anything so deathlike and appalling as these colours used with excessive contrasts of light and shade? Is it any wonder that it is with such combinations that Gustave Doré produces most of the harrowing effects in his series of pictures illustrating Dante's "Inferno"?

Now let us add black to yellow, orange, or red, either mixing the two or placing them side by side, and notice the effect. As said before, the very dark shades cannot, in painting, be used exclusively. If they be, the outlines cannot be made clearly perceptible. But to use black in connection with the lighter tints, introduces that variety which, as said on page 254, always increases the excitation of the effect. Warmth, in connection with black, or, as explained in the last paragraph, with apprehensive excitation,—emotive heat causing active resistance to that which is dreaded,—does not this describe, as nearly as anything can, a condition attendant upon *hostility* such as is represented to the ear by the gutteral tone? In the case of the warm colours, too, still more than in that of the cold, nature seems to have enforced the meanings of the combinations so that we shall not mistake them. Yellow and black, orange and black, red and black, or, in place of black, very dark gray, green, blue, or purple,

FIG. 51—INTERIOR OF BEVERLEY MINSTER ENGLAND.

See pages 99, 252, 310.

which are allied to black, — is there a particularly venomous insect or beast, or appearance of any kind, from a bee, or a snake, or a tiger, to the fire and smoke of a conflagration, or the lightning and cloud of a storm, in which we do not detect some presence of these combinations? No wonder, then, that so often in former times, at least, soldiers wore them when girded for the contests of the battle-field!

The whisper, in its weaker form, was said to represent not apprehension, but a more or less agreeable degree of interest. Of course, the weaker form of a negation of colour, at its extreme, must be represented by white. As applied to tones, there is no separate term of designation for this whisper when added to normal or orotund quality. Elocutionists merely speak of an aspirated normal or orotund, saying that, when aspirated, feeling is added to the effect of each. Let us recall now combinations of white with blue, green, or purple. Is there any difficulty in recognising how closely the result corresponds to that which is produced by an aspirated normal tone? We have all seen such combinations in summer costumes, as well as in tents and awnings over windows or verandas. In such cases, is there not a more exhilarating effect produced by them than could be produced by white alone? or by one of these colours alone? Yet, at the same time, is not the effect far cooler, and, in this sense, less exhilarating, than is produced by combinations of white with red, orange, or yellow?

In these latter we have, as has been said, that which corresponds to the effect of the aspirated orotund,—the tone used in earnest advocacy or description of something which is felt to be in itself of profound interest. Think of the combinations of white with these warmer

colours. Could any language better than that just used designate their peculiar inflence? What than they are more exhilarating or entrancing in the decorations of interiors, or in banners and pageants?

Even were it possible, which it is not, to illustrate fully in book-form these various effects of colour, there would be no great necessity for doing so. By following up the suggestions that have been made, those interested in the subject will have no difficulty in applying the principles unfolded,—sufficiently, at least, to become convinced of their essential accuracy. Nor is it necessary in this place to carry the discussion farther, and try to distinguish between the representative possibilities of each of the cold colours—green, blue, and purple, or of the warm colours—red, orange, and yellow. Viewed in their relations to mental effects, the differences between the colours of each group, as between the shades of each colour, are mainly of degree, not of kind, and depend largely upon the natural colour of the objects represented or by which these are surrounded. The only unvarying fact is that indicated by the general division into cold and warm colours. Accordingly attention has been directed here to this, and to this alone.

CHAPTER XIV.

ART-COMPOSITION.

Imagination Necessary in Elaborating as well as in Originating Representative Forms of Expression—Methods of Composing Music—Poetry—Painting, Sculpture, and Architecture—Mental Methods in Art-Composition Analogous to Other Mental Methods—To that in Classification—How Art-Classification Differs from Ordinary Classification—The Method of Classification not Inconsistent with Representing the Artist's Thoughts and Emotions—Or with Representing Nature—Explanation—Artists Influenced by Mental and Material Considerations—Methods of Art-Composition Are Methods of Obtaining Unity of Effect—Obtained in Each Art by Comparison, or Putting Like with Like—Variety in Nature Necessitating Contrast—Contrast in Each Art—Also Complexity—Complement—Order and Group-Form—Confusion and Counteraction—Principality and Subordination—Balance—Distinguished from Complement and Counteraction—Principality in Music and Poetry—Subordination and Balance in the Same—Principality in Painting and Sculpture—In Architecture—Organic Form—In Music—In Poetry—In Painting and Sculpture—In Architecture.

CHAPTERS XII. and XIII. have shown us that certain audible or visible effects traceable to material or to human nature have, either by way of comparison, as in imitation, or of association, as in conventional usage, a recognised meaning. This meaning enables the mind to employ them in representing its conceptions. But what has been said applies to the use of these effects so far only as they exist in the condition in which they manifest themselves in nature. Art-composition involves an elaboration and often an extensive combination of them.

How can they be elaborated and combined in such a way as to cause them to continue to represent the same conceptions that they represented before art had begun its work upon them? Evidently this result can be attained in the degree alone in which all that is added to the natural sound or sight representing the original conception continues to repeat the same representative effect. In other words, the imagination, which, by way of comparison or of association, connected together the original mental conception and the form representing it, must continue, in the same way to connect together this form and all the forms added to it by way of elaboration or combination. Other methods of expression—religious or scientific—may use imagination in only its initial work of formulating words or other symbols, but art must use it to the very end. It matters not whether its first conception be an image of a whole, as of an entire poem or palace, or whether it be an image of a part, as of a certain form of metre or of arch, the imagination, in dividing the image of the whole into parts, or in building up the whole from its parts, must always, in successful art, continue to carry on its work by way of comparison or association.

To illustrate this in music. How is a song or a symphony that is expressive of any given feeling, composed? Always thus: A certain duration, force, pitch, or quality of voice, varied two or three times, is recognised to be a natural form of expression for a certain state of mind,—satisfaction, grief, ecstasy, fright, as the case may be. A musician takes this form of sound, and adds to it other forms that in rhythm or in modulation, or in both, can be compared or associated with it, varying it in only such subordinate ways as constantly to suggest it; and thus he elaborates a song expressive of satisfaction, grief, ecstasy,

or fright. Or if it be a symphony, the method is the same. The whole, intricate as it may appear, is developed by recurrences of the same or very similar effects, varied almost infinitely but in such ways as constantly to suggest a few notes or chords which form the theme or themes.

A similar fact is true with reference to poetic elaboration. What are the following but series of comparisons,—reiterations of the same particular or general idea in different phraseology or figures?

> And what is music then? Then music is
> Even as the flourish when true subjects bow
> To a new-crowned monarch; such it is,
> As are those dulcet sounds in break of day,
> That creep into the dreaming bridegroom's ear,
> And summon him to marriage.
>
> *Merchant of Venice, iii., 2: Shakespeare.*

> Brutus and Cæsar: what should be in that Cæsar?
> Why should that name be sounded more than yours?
> Write them together, yours is as fair a name;
> Sound them, it doth become the mouth as well;
> Weigh them, it is as heavy; conjure with them,
> "Brutus" will start a spirit as soon as "Cæsar."
>
> *Julius Cæsar, i., 2: Idem.*

What do we have in the poetic treatment of a subject considered as a whole, as in an epic or a drama? Nothing but repeated delineations of the same general conceptions or characters as manifested or developed amid different surroundings of time or of place.

So with the forms of painting, sculpture, and architecture. Every one knows that, as a rule, certain like lines, arches, or angles are repeated in the columns, cornices, doors, windows, and roofs of buildings. Few, perhaps, without instruction, recognise that the same

principle is true as applied to both the outlines and colours through which art delineates the scenery of land or water or the limbs of living creatures. But one thing almost all recognise: This is that, in the highest works of art, every special effect repeats, as a rule, the general effect. In the picture of a storm, for instance, every cloud, wave, leaf, bough, repeats, as a rule, the storm's effect; in the statue of a sufferer, every muscle in the face or form repeats, as a rule, the suffering's effect; in the architecture of a building,—if of a single style,—every window, door, and dome repeats, as a rule, the style's effect.

It is important to notice now that this method of art-composition which has been indicated is in analogy with methods which the mind employs with reference to many other subjects besides those which concern art. The appearances of nature which the artist has to study are the same as those which every man has to study. They confront the child the moment that eye or ear is fairly opened to apprehend the world about him. As soon as he begins to observe and think and act, these furnish him with his materials—with facts to know, with subjects to understand, with implements to use. Always, however, before he can avail himself of them, he must do what is expressed in the old saying, "Classify and conquer." When the child first observes the world, everything is a maze; but anon, out of this maze objects emerge which he contrasts with other objects and distinguishes from them. After a little, he sees that two or three of these objects, thus distinguished, are alike; and pursuing a process of comparison he is able, by himself, or with the help of others, to unite and to classify them, and to give to each class a name.

As soon as, in this way, he has learned to separate certain animals,—horses, say, from sheep,—and to unite and classify and name them, he begins to know something of zoölogy ; and all his future knowledge of that branch will be acquired by further employment of the same method. So all his knowledge, and not only this, but his understanding and application of the laws of botany, mineralogy, psychology, or theology will depend on the degree in which he learns to separate from others, and thus to unite and classify and name certain plants, rocks, mental activities, or religious dogmas. Without classification to begin with, there can be no knowledge, no understanding, no efficient use of the materials which nature furnishes. The physicist is able to recognise, relate, and reproduce effects in only the degree in which he is able to classify the appearances and laws, the facts and forces of material nature. The metaphysician is able to know and prove and guide to right action in only the degree in which he is able to classify feelings, conceptions, and volitions with their motives and tendencies as they arise in mental consciousness and manifest themselves in action.

Why should not the same principle apply in the arts? It undoubtedly does. Just as the physicist classifies effects conditioned upon laws operating underneath phenomena of a physical nature, and the psychologist classifies effects conditioned upon laws operating underneath phenomena of a psychical nature, so the artist classifies effects conditioned upon laws operating underneath phenomena of an artistic nature. It is true that what has been called classification does not in art result merely in mental conceptions of classes, as of *horses* or *oaks* in science, or as of *materialists* or *idealists* in philosophy. The first result is a mental conception ; but afterwards, through

a further application of precisely the same methods, there comes to be an objective external product. In other words the artist begins by gaining a general conception of a class in the same way as the scientist and philosopher; but he ends by producing a special specimen of the class. Let us try to perceive just what is meant by this statement. While doing so, we may be able to perceive also in what sense it is true that the mind, when classifying in art, is still representing, as all art should, both its own thoughts and emotions, and also the natural phenomena surrounding it.

To show that the mind is still representing its own thoughts and emotions, one need only direct attention to the intimate connection that always exists between giving expression to general conceptions, and representing the whole range of the results of a man's observation and thought that together constitute his mental character. Imagine a gardener classifying his roses—as he must do instinctively the moment that he has to deal with any large number of them—and obtaining thus a general conception of the flower. Then imagine him trying in some artificial way to produce a single rose embodying this conception. This rose will very likely resemble some one rose particularly present to his mind while forming it; yet probably because, before starting with his work, he has obtained a conception of roses in general, his product will manifest some rose-like qualities not possessed by the specimen before him, but suggested by others. That is to say, because of his general conception derived from classifying, he does more than imitate—he represents in that which is a copy of one rose ideas derived from many roses. The same principle applies to all works of art. Let a man write a story or paint a picture. In nine cases

out of ten in the exact degree in which he has observed and classified many like events or scenes, he will add to his product the results of his own thinking or generalising. In fact, it is a question whether the chief charm of such works is not imparted by the introduction into them, in legitimate ways, of this kind of generalisation having its sources not in the particular things described, but in the brains of the describers, who have already been made familiar with many other things somewhat similar. Shakespeare certainly did not get the most attractive features of his historical plays from history, nor Turner those of his pictures from nature. So, as a rule, even in the most imitative of works, the really great artist, consciously or unconsciously, gives form to conceptions that he has derived from an acquaintance with many other objects of the same class as those imitated. There is no need of saying more to show what is meant by affirming that *the mind of the artist* that would represent itself in art must start by classifying in order to conquer the forms of nature with which it has to deal.

Now let us notice that the mind, when classifying, may still represent the natural phenomena surrounding it. At first thought, classification and imitation appear to necessitate different processes. But possibly they do not. Suppose that natural forms themselves were all found to manifest an effect like that of classification. In this case, to imitate them would involve imitating it; and to add to them, as is usually done in art, and to add to them in such ways as to make the added features seem analogous to the imitated ones, and thus to cause the forms as wholes to continue to seem natural, would involve continuing the process of classification. Now, if, with this thought in mind, we recall the appearances of

nature, we shall recognise that the condition which has been supposed to exist there really does exist. A man, when classifying rocks, puts together mentally those that are alike. So does nature, grouping them in the same mountain ranges, or at the bottoms of the same streams. He puts together leaves, and feathers, and hairs that are alike. So does nature, making them grow on the same trees, or birds, or animals. He puts together human beings that are alike. So does nature, giving birth to them in the same families, races, climates, countries. In fact, a man's mind is a part of nature ; and when it works naturally, it works as nature does. He combines elements as a result of classification, in accordance with methods analogous to those in which nature, or, "the mind in nature," combines them. Indeed, he would never have thought of classification at all, unless in nature itself he had first perceived the beginning of it. He would never have conceived of forming a group of animals and calling them horses, nor have been able to conceive of this, unless nature had first made horses alike. To put together the factors of an art-product, therefore, in accordance with the methods of classification, does not involve any process inconsistent with representing accurately the forms that appear in the world. These forms themselves are made up of factors apparently put together in the same way, though not to the same extent.

In the author's book entitled "The Genesis of Art-Form," the suggestions derived from a line of thought similar to that just pursued, are developed into various methods used in art-composition. These methods are printed in the chart on page 277 of the present volume. In that book the methods and the effects of applying them to each art are described in detail. For our present

METHODS OF ART-COMPOSITION.

Mainly Conditioned upon the Requirements of the Mind.

Mainly conditioned upon	*Mind.*	*Matter.*	*Mind and Matter.*	*Mind and Matter.*
Mind.	UNITY.	VARIETY.	COMPLEXITY.	
Matter.	ORDER.	CONFUSION.	COUNTERACTION.	GROUPING.

Mainly Conditioned upon the Requirements of Matter.

Mind.	COMPARISON.	CONTRAST.	COMPLEMENT.	ORGANIC FORM.	DURATION IN TIME. EXTENSION IN SPACE.	RHYTHM AND PROPORTION.
Matter.	PRINCIPALITY.	SUBORDINATION.	BALANCE.			

Mainly Conditioned upon the Requirements of the Product.

Mind.	CONGRUITY.	INCONGRUITY.	COMPREHENSIVENESS.	SYMMETRY.	ACCENT IN STRESS AND LINE.	RHYTHM AND PROPORTION.
"	CENTRAL POINT.	SETTING.	PARALLELISM.			
Matter.	REPETITION.	ALTERATION.	ALTERNATION.	CONTINUITY.	QUALITY AND PITCH IN NOTE AND COLOR.	HARMONY IN NOTE AND COLOR.
"	MASSING.	INTERSPERSION.	COMPLICATION.			
Mind and Matter.	CONSONANCE.	DISSONANCE.	INTERCHANGE.	PROGRESS.		
"	GRADATION.	ABRUPTNESS.	TRANSITION.			

purpose, it will be necessary merely to mention them briefly.

From what has been said already, it is evident that the artist in his work is influenced by both *mental* and *material* considerations. He starts with a conception which in his mind is associated with certain forms or series of forms. He copies these, and adds others that seem like them; *i. e.*, he makes use of forms attributable, some of them, to the character of the conception that he wishes to express, and some of them to the character of the resemblance to others which they show; some of them, in other words, to mental, and some of them to material considerations. But while this is true in such a sense as to justify a general division of his methods upon the ground that they are traceable in part to the character of mind and in part to that of nature, there is also a sense in which every one of them is traceable to both. For this reason a discussion of any method whatever must include, to be complete, some reference both to its mental and to its material bearings. With this explanation, which will show that it is not intended to make too exclusive a statement in any case, we may divide the methods of classification and also of art-composition into those that manifest chiefly the effects of *mind*, of *nature*, and of the combined influences of *both*. (See chart on page 277.)

So far as classification results from the conditions of *mind*, its function is to simplify the work of forming concepts, and its end is attained in the degree in which it enables one to conceive of many different things— birds or beasts, larks or geese, dogs or sheep, as the case may be —as one. Classification is, therefore, an effort in the direction of *unity*. It is hardly necessary to add that the same is true

of art-composition. Its object is to unite many different features in a single form.

Unity being the aim of classification, it is evident that the most natural way of attaining this aim is that of putting, so far as feasible, *like with like;* and that doing this necessitates a process of *comparison.* Applying this principle to art-composition, and looking, first, at music, we find that the chief characteristic of its form is a series of phrases of like lengths, divided into like numbers of measures, all sounded in like time, through the use of notes that move upward or downward in the scale at like intervals, with like recurrences of melody and harmony. So with poetry. The chief characteristics of its form are lines of like lengths, divided into like numbers of feet, each uttered in like time, to which are sometimes added alliteration, assonance, and rhyme, produced by the recurrence of like sounds in either consonants, vowels, or both. In painting, sculpture, and architecture, no matter of what "style," the same is true. The most superficial inspection of any product of these arts, if it be of established reputation, will convince one that it is composed in the main by putting together forms that are alike in such things as colour, shape, size, posture, and proportion. In confirmation of this, observe, of paintings, "The Descent from the Cross," Fig. 1, frontispiece; the "Pollice Verso," Fig. 4, page 41; "The Storm," Fig. 7, page 91; "Lines Expressive of Storm," Fig. 30, page 221, and "Lines Expressive of Repose," Fig. 31, page 223, and "The Soldier's Return," Fig. 9, page 97. Finally of buildings observe, in the Greek style, the "Maison Carrée," Fig. 15, page 104, and the "Temple of Ægina," Fig. 28, page 219; in the Gothic style, the Cathedral of Cologne, Fig. 33, page 226; and in the Byzantine and Oriental styles, "St. Mark's," Fig. 34, page 227; the "Chinese Temple,"

Fig. 52, page 280, and that great memorial structure of India, by many considered the most beautiful building in the world, the "Taj Mahal," Fig. 53, page 281.

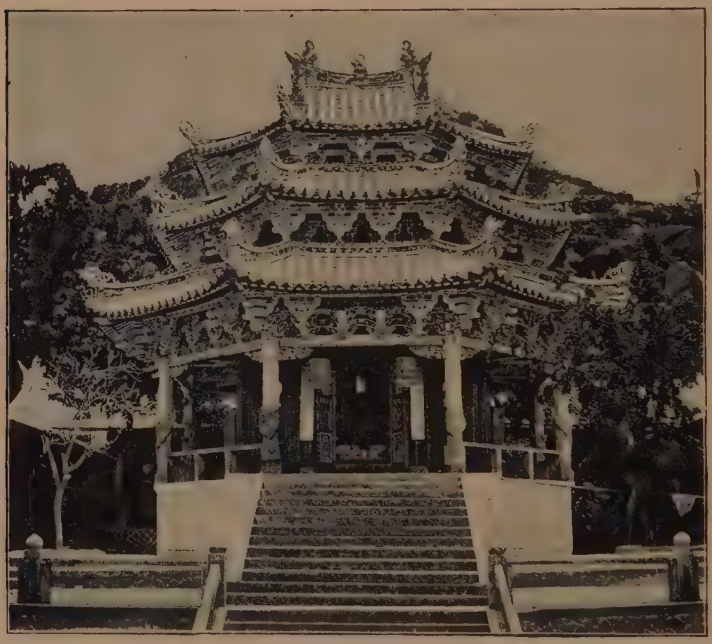


FIG. 52.—POUTOU TEMPLE, NINGPO, CHINA.
See pages 99, 279, 280, 296.

But classification is traceable not only to the conditions of *mind* but also of *nature*. (See chart on page 277.) It is in the latter that the mind is confronted by that which classification is intended to overcome, by that which is the opposite of unity — namely, *variety*. If there were none of this in nature, all things would appear to be alike, and

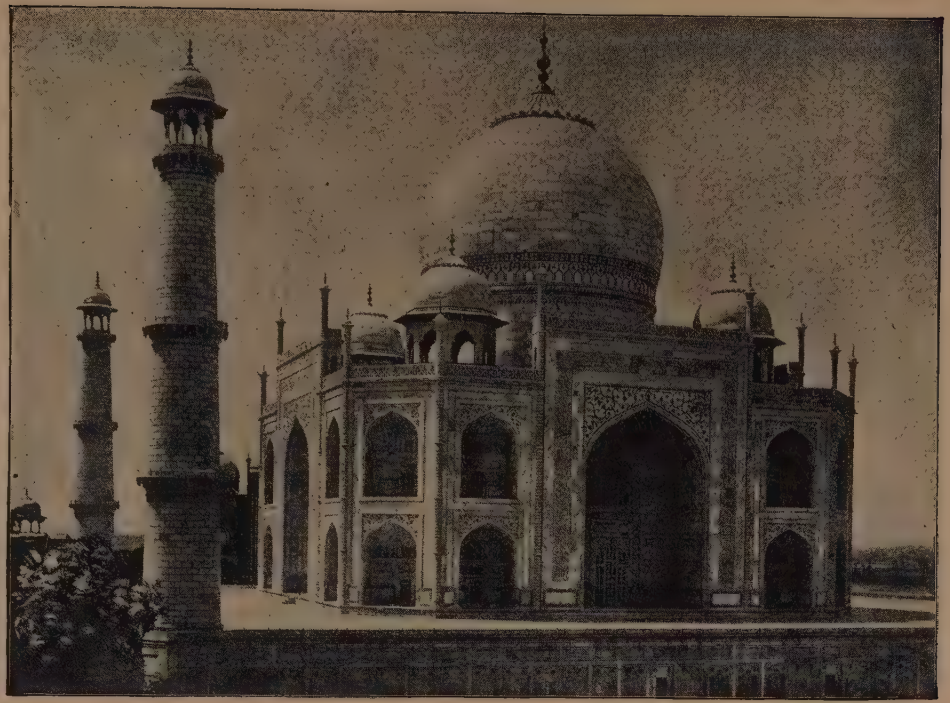


FIG. 53.—TAJ MAHAL, INDIA.

See pages 222, 280, 293, 296, 302.

classification would be unnecessary. As a fact, however, no two things are alike in all regards; and the mind must content itself with putting together those that are alike in some regards. This is the same as to say that classification involves, occasionally, *putting the like with the unlike;* and necessitates *contrast* as well as comparison. The objects brought together in the same group, while similar in certain general and salient features, are dissimilar in particular and less prominent ones. From a distance, or upon first observation, all the voices of men and all the trees of a forest may seem like repetitions of one another. Were it not so, we should fail to understand what is meant by the terms "human voice" and "oak-tree." We use these terms as a result of unconscious classification obtained by regarding certain general features that first attract attention. But when we approach near the object or examine it carefully, we find that each voice and tree differs from its neighbours; not only so, but each note of the same voice and each leaf of the same tree.

A similar fact is observable in products of art. One of the most charming effects in music and poetry is that produced when more or less unlikeness is blended with the likeness in rhythm, tone, and movement which, a moment ago, was said to constitute the chief element of artistic form. Notice this fact as exemplified in the poetry on page 325. In painting and sculpture one of the most invariable characteristics of that which is inartistic is a lack of sufficient diversity, colours too similar, outlines too uniform. See the quotations on page 315. So, too, with architecture. Notice the conventional fronts of the buildings on many of the streets of our cities. Their accumulations of doors and windows and cornices, all of like sizes and shapes, are certainly not in the highest sense interesting.

When we have seen a few of them, we have seen all of them. In order to continue to attract our attention, forms must, now and then, present features that have not been seen before.

As contrast is exemplified in *complement*, *subordination*, *balance*, *alternation*, and other methods that are to be considered hereafter, there is no need of dwelling upon it here, nor upon the self-evident fact brought out in the chart on page 277, that any form composed of both like and unlike factors necessarily manifests more or less *complexity*.

Complement is a term applied to two things that contrast, and yet concur, because together they complete the one thing to which they equally belong. Complement must be regarded, too, in classification, because every department of nature is full of it. Certain kinds of metals and ores, leaves and branches, males and females, alike in some regards, unlike in others, are always found together, and are both necessary to the realisation of the type. So in the arts. In those of sound, high and low tones contrast; and yet for rhythm, melody, or harmony, both are necessary. In the arts of sight, light and shade contrast; and yet, to represent the effects of form as it appears in sunlight, both are necessary. In colours, again, certain hues, like blue-green and red, contrast; and yet as both, when blended together, make white, both may be said to be necessary to the completeness of light. In all these cases the contrasting factors are termed complements.

When, owing to *variety* and *complexity*, *unity* cannot be attained through a use of forms as they exist in nature, it must be attained through a method of using them; in other words, through *order*. When thus attained, thought

contents itself with arranging forms together, one after another, according to the degree in which a first form is like a second, and a second like a third, and so on. This process can be continued almost indefinitely. As a fact, there are, as it were, links of resemblance enabling one to connect every kind or class of form with other kinds or classes nearly related to it, and thus to connect all possible kinds or classes together. When an attempt is made to do this, the forms or classes, according to their degrees of difference, come to be grouped in a regularly graded series. We may express this fact by saying that the forms or the classes, as a whole, come to have *group-form*. When this result is reached, the work of *order* is manifest. Of course, the principle applies to the bringing together of factors either in scientific classification or in an art-work. Notice the group-form, or orderly arrangement, of the objects and persons represented in Fig. 1, frontispiece; Fig. 4, page 41; Fig. 8, page 96; Fig. 9, page 97; Fig. 22, page 167; and Fig. 37, page 233.

When the conditions of nature necessitate such an effect of variety that there is no order, we have that lack of arrangement preceding and necessitating classification which is termed *confusion*. But, because *confusion* exists in nature, it may sometimes be legitimately introduced into art. It is evident, however, that although a little *confusion*, like a little *contrast*, may sometimes, by way of *variety*, add greatly to the attractiveness of that with which it is associated, it nevertheless needs to be used in such a way as to suggest the dominance of unity and order. This is the same as to say that *confusion* necessitates *counteraction*. Counteraction keeps confusion within the compass of some rhythm, tune, shape, or hue; and causes the whole, in spite of opposing elements, to manifest method. If

applied to music, it causes gongs or drums to be struck so as to augment the rhythmic effect of the general movement. Applied to painting, it causes tangled masses of wool, or foliage, to hang about animals, trees, or towers ; and sometimes, through a use of a background of mathematical architectural forms, it holds together and makes a unity of otherwise confused groups of men, as in Raphael's "School of Athens" (Fig. 22, page 167).

In making a practical application of the requirements of *order* and of the methods associated with it, some member of a class is always considered first, after which are arranged in order second, third, fourth, and other members. But of all these, the first is evidently the most important. It is the nucleus about which the others are grouped ; and, theoretically considered, we should judge that it would be typical of them all. Practically, too, it is so. Classification is invariably begun by observing a few details characterising some one form — say a palm-tree or a wolf — to which is given what is sometimes termed *principality*. About this form are then grouped other forms, all of which are said to belong — as the case may be — to the palm family or the wolf family. In art the conception of a theme in poetry, music, painting, sculpture, or architecture, is identical with that of a particular form apprehended by the mind. When this form, or, if it be only such, this feature is given *principality*, it follows, as an axiom, that all other forms or features associated with it must be given *subordination*. See the chart on page 277.

Once more, wherever there is a principal factor and also a subordinate, or many subordinate factors, the endeavour to arrange them together leads to what is termed *balance*. Balance is an effect of an equilibrium obtained by arranging like features on both sides of a real or ideal centre. It

makes no difference whether the features be alike in quantity, which is the first suggestion given by the word, or in quality. All that is necessary is that in some way they should be or seem alike. In this regard *balance* differs from either *complement* or *counteraction*; for in both of these an essential consideration is unlikeness. At the same time, all three have much in common. One arm, for instance, thrust forward from a bending body and one leg thrust backward from it, may contrast strongly in both appearance and position; and in this regard may resemble complement. Undoubtedly, too, they counteract each other. But because they present an appearance of equilibrium in that like quantities seem to be on each side of the centre, our first thought is not that they complement or counteract, but that they balance.

The close connection between these three, *complement*, *counteraction*, and *balance*, accounts for the fact that in ordinary language and conception they are not clearly distinguished. Nor is it often important that they should be. In one regard, at least, they are all alike. They are all developments of the same principle. *Complement* produces unity in a natural way from things different. *Counteraction* applies the principle underlying complement to things that are not complementary by nature; and *balance*, going still farther, applies the same principle to things that may be neither complementary nor counteractive, in such a way as to give a more satisfactory appearance to the form by adding to it an effect of equilibrium. A still later development of the same principle, preceding which, however, there need to be some intervening stages, results in *symmetry*. See chart on page 277.

To notice the ways in which the methods that have just been mentioned may be applied in each of the arts, a few

notes—only the suggestion, perhaps, of a melody—furnish a form and with it a *principal* theme expressive of some musical idea. Other *subordinate* series of notes, supposed for some reason to be more or less like the first, or, if not, at least *complementing*, *counteracting*, or *balancing* it or one another, are arranged in order about it, and through the use of them is developed a work like a symphony. A few phrases containing certain accented and unaccented syllables, perhaps only one word like the "Nevermore" of Poe's "Raven," furnish a form and with it a principal theme expressive of some poetic idea; and by a similar process there is developed a whole poem. Sometimes a chorus or refrain at the end of successive stanzas illustrates principality, *e. g.*:

> Home, home! sweet, sweet home!
> Be it ever so humble, there 's no place like home!
> *Home, Sweet Home: Payne.*

Sometimes the principal thing may be some grand event of historic or religious importance, to which all the other events that are mentioned are subordinate, mainly serving, by way of comparison or contrast, to give it greater prominence. Notice how the keynote of the whole of Homer's "Odyssey" is struck and foreshadowed in its opening sentence:

> Tell me, O muse, of that sagacious man
> Who, having overthrown the sacred town
> Of Ilium, wandered far and visited
> The capitals of many nations, learned
> The customs of their dwellers, and endured
> Great sufferings on the deep; his life was oft
> In peril, as he laboured to bring back
> His comrades to their homes.
> *Bryant's Trans.*

Usually, the principal idea in a symphony or a poem is embodied in a principal form. This may be a certain kind of metre, rhythm, phrase, or verse; but notice that, whatever it be, it constantly involves manifestations of *principality*, *subordination*, and *balance*. In metre, the accented note or syllable is the principal thing, to which the unaccented notes or syllables are subordinated; and the unaccented syllables balance also the accented. Consecutive musical phrases usually balance one another by forming alternating upward and downward movements. So also do poetic couplets, especially when they end with rhymes. All through music and poetry, too, we find a constant tendency to secure effects of balance by repeating the same sounds at least twice, *e. g.*:

Bright *bank* over *bank*
Making *glorious* the *gloom*,
Soft *rank* upon *rank*,
Strange *bloom* upon *bloom*,
They *kindle* the *liquid low* twilight and *dusk* of the *dim* sea's womb.
Off Shore: Swinburne.

In painting and sculpture the principal object is sometimes brought into prominence by being made larger than the subordinate objects. This was the old Egyptian method. According to Miss Edwards, in her "Thousand Miles up the Nile," in the pictures still remaining in the tomb of Ti, near the site of ancient Memphis, the figures of the principal character are, in all cases, about eight times as large as those of the servants represented as at work around him. Sometimes, as in some of the "Madonnas" of the old masters, the principal figure, though no larger in itself, is made to have a larger effect by being elevated on a throne or in clouds. See Raphael's "Transfiguration," Fig. 54, page 289. Sometimes

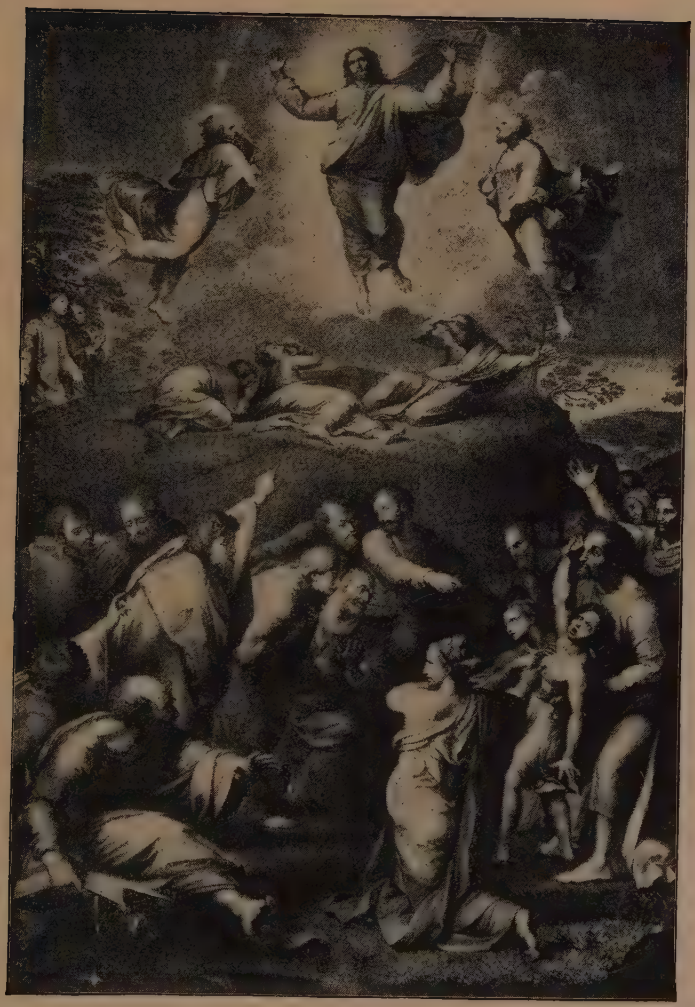


FIG 54 —TRANSFIGURATION.—RAPHAEL.

See pages 242, 288, 295 and 298.

this figure is in the foreground, as the gladiator in Gérôme's "Pollice Verso," Fig. 4, page 41, or as the central character in Raphael's "Ananias," Fig. 37, page 233. Sometimes, in connection with these other methods, the leading outlines of pictures are made to radiate from the chief figure, as from the Christ in the air, in Raphael's tapestry of the "Conversion of St. Paul"; or from the gladiator in Gérôme's "Pollice Verso," Fig. 4, page 41. Sometimes a figure is made most prominent by the use of colour, as by red drapery given to the Christ in Titian's "Scourging of Christ"; and sometimes by a use of light and shade, the former being concentrated where it will necessarily attract attention. In Rubens's "Descent from the Cross," Fig. 1, frontispiece, a white sheet, the whitest object in the picture, is placed behind the form of the Christ. In Correggio's "Holy Night," all the brightness in the picture is reflected from that which illumines the face of the infant Jesus. It is needless to say at what the spectator looks first when viewing these works. He at once recognises the principality of the form about which all the light is massed. When, in either painting or sculpture, the whole work contains but a single figure, the relative prominence of merely different parts of this must show the influence of these methods. In the woman in Fig. 36, page 231, the hand upon the breast seems to give principality to the heart, the seat of the affections. The erect head on the "Apollo," Fig. 23, page 170, in connection with the commanding gesture, gives principality to this, the seat of the directing power, or of authority. In architecture, principality is attained by making prominent a porch, as in Fig. 28, page 219; or a window, as in Fig. 29, page 220; or domes or spires, as in Fig. 79, page 354 or Fig. 33, page 226.

The numbers of ways in which effects of *balance* may be secured in these visible arts, especially in painting, seem practically infinite. As a method, too, it is almost universal. In Gérôme's "Pollice Verso," Fig 4, page 41, a gladiator's limbs stretched upon the ground on one side of his triumphant antagonist are exactly balanced by the armour that has been stripped from them, which lies on the other side of the victor; while the arm of the latter, lifted that his sword may strike, is balanced by his victim's arm lifted to appeal for mercy. In the first case,

FIG. 55.—A SMALL HOUSE.
See pages 293 and 302.

we have an instance of balance produced in spite of decided contrast between the balancing members. As exemplified in the human figure, and so in sculpture, *balance* can never be fully understood, except as it is treated in connection with both *symmetry* and *proportion.* Here it is sufficient to point out that, as a rule, in order to secure variety, the limbs of the two sides of the body should be in somewhat different positions. If this arrangement be adopted, nature requires that a man should keep his equilibrium, and art that he should seem to keep it by

showing an exertion in one direction sufficient to counteract that made in the other. For this reason, when one is gesturing, or appearing to gesture, his hands and head, if the latter be not kept erect, should make counteracting movements. The head should move toward the hands when they are lifted, and away from them when they fall. Or if he be posing, and an arm be thrust out on

FIG. 56.—WILLESDEN CHURCH, NEAR LONDON.
See pages 293 and 302.

one side of him, his other arm, or his head or his hip, should be thrust out on his other side, sufficiently at least to secure an effect of equilibrium. Notice Fig. 42, page 237, and Fig. 45, page 239. The necessity in art of seeming to carry out such requirements, especially where postures are unusual, presents one of the greatest difficulties which the painter or sculptor has to encounter.

In architecture, it is possible for one subordinate feature to complement the principal, as a wing, or porch, or door at one side of a house may balance the whole façade of the building to which it is attached (Fig 55, page 291); or as a tower at one side or corner may offset the body of a church (Fig. 56, page 292). However, such arrangements are in place mainly in smaller buildings, in which graceful and picturesque effects are desirable. In the degree in which a building, like a church, a court-house, or a school, is to be devoted to a serious purpose, it should convey an impression of dignity. In art, as in life, this effect results from an appearance of perfect equilibrium. In architecture it is secured in the degree in which the principal entrance is exactly in the middle of the façade, with an equal number of subordinate features, towers, pillars, or openings, as the case may be, on either side of it. Notice, as exemplifying this arrangement, "Cologne Cathedral," Fig. 33, page 226; the "Taj Mahal," Fig. 53, page 281; "St. Mark's, Venice," Fig. 34, page 227, or Fig. 79, page 354.

In the chart on page 277 it was intimated that principality, subordination, and balance together cause an art-product to have *organic form.* In nature an organic as distinguished from an inorganic form is one of greater or lesser degrees of complexity, pervaded everywhere by channels or organs through which flow effects that influence every part of the form, but of it only, beyond the contour of which they cease to operate. Trees and animals, for instance, with their various circulatory systems, are organic. Sand and clay are not. To say, therefore, that the products of art should have organic form is the same as to say that they should be characterised by effects analogous to those produced by the forms of

objects that have what we term life. This statement will cause some of us to recall that Plato named head, trunk, and feet as the three essential features in every work of art; and Aristotle, recalling the fact that all products do not appeal to the eye, and cannot seem to have visible bodies, tried to state a principle more general in its reach by declaring that they should all have beginning, middle, and end. But both statements are virtually the same, and together are inclusive of all possible artistic applications of the subject. The first applies literally to forms that appear in space, the second to those that appear in time. Both mean that there should be such an order in the arrangement of the parts constituting the form as to cause all the parts to seem to be organically connected with one whole, and this whole to seem to possess all the parts necessary to render it complete.

This is a principle recognised as essential in every art. Here, for instance, are the various elements and developments of a musical periodic form, as given by Marx in his "Theory and Practice of Musical Composition":

	Beginning	Middle	End	
	Repose	Motion	Repose	
	Tonic	Scale	Tonic	
Repose	Motion	Repose	Motion	Repose
Tonic	Tonic Scale	Tonic 8va	Tonic Scale	Tonic
Tonic Mass	Motion	Half Cadence	Motion	Full Cadence
	Repose	Motion	Repose	
	First Part	Second Part	Third Part	
	8 Measures	8 or 16 Meas.	8 Measures	
	Repose	Motion	Repose	

Here is an example of poetic organic form:

Home they brought her warrior dead;
She nor swoon'd, nor utter'd cry:
All her maidens, watching, said,
"She must weep or she will die."

Then they praised him, soft and low
  Call'd him worthy to be loved,
Truest friend and noblest foe;
  Yet she neither spoke nor moved.

Stole a maiden from her place,
  Lightly to the warrior stept,
Took the face-cloth from the face:
  Yet she neither moved nor wept.

Rose a nurse of ninety years,
  Set his child upon her knee—
Like summer tempest came her tears—
  "Sweet my child, I live for thee."

The Princess: Tennyson.

The most uncultured mind recognises the superior attractiveness of paintings, statues, or buildings that seem to have "some head and tail,"— an expression indicating how well people in general appreciate, in the arts appealing to sight, the characteristics that Plato designated by the terms head, trunk, and feet. In arranging a number of objects or individuals to be represented in the same picture, an artist will almost invariably place the larger or more prominent in the centre or at the top, thus giving the group a head; and the others on either side or below, thus giving it a trunk and feet; while he will dispose of all the members in such ways that the contour of the group, as outlined by all their forms together, shall seem to have some shape — that suggesting a circle, an arch, or a pyramid, as the case may be. See Fig. 8, page 96; Fig. 19, page 123, and Fig. 54, page 289.

In architecture, the foundation corresponds to the foot, the wall to the trunk, and the roof to the head. All these features taken together may present effects of grouping similar to those in painting and sculpture. The various projections, gables, pediments, chimneys, domes, spires,

whatever they may be, that make up the wings and roofs, may be arranged so that, taken together, they can be inscribed in a low or a high arch, rounded or sharpened like a pyramid. As a rule, the greater the appearance of the exercise of design in the organic arrangement of these features, the more satisfactory are they to the eye that looks to find in them the results of art. (See the "Chinese Temple," Fig 52, page 280; the "Taj Mahal," Fig. 53, page 281; "St. Mark's, Venice," Fig. 34, page 227, and Fig. 79, page 354.)

CHAPTER XV.

ART-COMPOSITION—CONTINUED.

Congruity, Incongruity, and Comprehensiveness — Central-Point, Setting, and Parallelism—In Music and Poetry — In Arts of Sights—Symmetry —Repetition, Alteration, and Alternation in Music and Poetry—In Arts of Sights—Massing in Music and Poetry—Massing or Breadth in Painting—Illustrations—In Sculpture and Architecture—Interspersion and Complication—Continuity—Music and Poetry—In Arts of Sight—Consonance—Distinguished from Congruity and Repetition—Dissonance and Interchange—The Latter in Painting—Gradation and Abruptness—In Music and Poetry—Transition in Same Arts—Gradation and Abruptness in Colour—In Outline—In Architecture—Progress in Painting and Sculpture—In Architecture—Completeness of this Analysis of the Methods of Art-Composition

OF the remaining methods of art-composition, mentioned in the chart on page 277, the grouping of factors which corresponds to such classification as results from connecting objects because of like effects produced upon the *mind* by way of association or suggestion, is termed *congruity* (from *con*, together, and *gruo*, to grow). It means that two things are conceived of as naturally growing or going together; and it may cause them to be connected when in reality they are as unlike as the sounds of a church bell and of an organ, or as the crape of a widow's garb and a white face. It is hardly necessary to show that the principle of *variety* applied to congruity leads to *incongruity*, or that both together lead to *comprehensiveness*. For instance, in the earliest composed overture of Wagner's

"Tannhauser," a slow choral, representative of the religious element, is at first entirely interrupted by wild contrasting movements, representing the surgings of the passions; then, after a little, it reappears again, gains strength, and finally by main force seems to crush the others down, and in the final strain entirely to dominate them. Here, in the blending of the most intensely spiritual and material of motives, is *incongruity*, and with it a *comprehensiveness* including the widest extremes. Yet how artistically the like features are grouped with like, and each phase of expression made to *complement* the other; and when the two clash, how *principality* gets the better of what would else be *insubordinate*, and reduces all to *order!* Again, in the upper part of Raphael's "Transfiguration," Fig. 54, page 289, supposed to represent the summit of a mountain, are the glorified forms of Christ, Moses, and Elias, prostrate beneath whom are three apostles, while two saints kneel reverently beside them. At the bottom of the picture are others of the apostles, supposed to be not so near the summit, endeavouring in vain, amid the distress and consternation of the spectators, to cast out an evil spirit from a boy whom he is tormenting. Few can fail to recognise the antithetic *incongruity* both of thought and form between the two parts of the picture, and, together with this, the grouping of like with like, so as to cause the one part to *complement* the other. Besides this, and because of it, the picture is *comprehensive*, as would not otherwise be possible, of the entire range of spiritual power on earth, all the way from the rapture of the Christ transfigured by the power of the Deity to the terror of the boy transfixed by that of the Devil.

On page 277 the methods mentioned next after congruity, because the most nearly connected with it, are such as

have to do with dividing up the time and space occupied by congruous or incongruous features in ways intended to produce effects of likeness, in spite of opposing suggestions in the forms. It will be found, for instance, that by distributing objects on lines, real or ideal, meeting at a *central-point*, or in some regular way, upon a circumferential *setting* for this, all the features of a composition can be made to become, in almost equal degrees, factors of the same general effect. So, by adjustments of a composition, a relationship by means of *parallelism* may be created, say between the sound of a trumpet or a flute and the rattle of a drum, or between the body of a horse and the road over which he moves; or between the forms of bushes and of the robes of men, although, at the same time, none of these things, when compared, are sufficiently alike in themselves to be grouped distinctively by way of repetition or consonance. The same is true, too, of the representation of the balancing of the outlines or accents of many different features, some of them radically unlike in many regards, which we find in *symmetry*.

In music and poetry, *central-point* is illustrated by movements or words that seem to bring everything to a climax or point, as we say; *setting*, by that which is discursive or digressive; and *parallelism*, by simultaneous effects or movements that are similar, as in two parts sung in unison; two phrases repeating the same theme; two lines expressing the same idea, or forming what in poetry is called a couplet. In ancient Hebrew poetry, what is termed parallelism fulfilled both these last two requirements, *e. g.*:

> Thy fierce wrath goeth over me;
> Thy terrors have cut me off.
> They came round about me daily like water;

They compassed me about together.
Lover and friend hast thou put far from me,
And mine acquaintance into darkness.
Psalm lxxxviii., 16, 17, 18.

If we apply these principles to form, irrespective of significance, we may say that the accents are like so many radiating lines that, one after another, keep directing attention to the movement—in other words, *pointing* to it. The unaccented sounds, again, that connect the accented, determining as they do, and as the accents do not, the particular rhythm or metre, whether double or triple, may be said to furnish the *form-setting*, while the series of lines or phrases correspond exactly, as was said a moment ago, to the series of lines that produce *parallelism* in the arts of sight. The resulting *organic-form* of the movement, as secured in the general balance throughout of foot and line, measures the degree of *symmetry*. These analogies are so evident that they need only to be stated.

Central-point, as used in the arts of sight, is merely a development—sometimes, as is the case with many effects in art, an excessive development—of the natural fact that two points in the extreme distance are always related to two points equally separated but nearer us in such a way that, if there were parallel lines drawn between the two pairs of points and extended far enough into space, such lines would meet in the distance and form one point. See Fig. 2, page 3. An excellent illustration of the methods of applying this principle, as well as *setting* and *parallelism*, to the arts of sight may be noticed in the "Pollice Verso," Fig. 4, page 41. In the centre of this picture a gladiator stands with his heel on the neck of a prostrate antagonist, and looks up for a signal to save the life which is at his

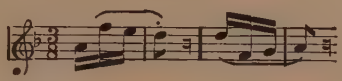
mercy. With scarcely an exception, the crowd of spectators, who fill an amphitheatre above, answer this appeal by stretching a hand towards the gladiator, with the thumb downward, indicating thus their desire to have him show no mercy to his fallen antagonist. Of course, all the extended arms, by pointing as they do, direct attention to the gladiator as the principal object of interest, and also make of the whole picture a unity both in thought and form. But, in addition to this, the horizontal outlines in the front wall of the amphitheatre, which concentrate according to the laws of the perspective, also the outlines of a pillar of the amphitheatre and of one prominent division between its benches, as well, too, as the outlines of the forms of two gladiators already slain and lying on the ground,—all these are given such directions that they, too, point toward the principal figure. *Setting*, of course, is illustrated in the lines that do not point thus toward a common centre. Of the *parallel* lines, in the painting just mentioned, one can count at least fifteen that are horizontal, nine of them formed by the architectural work with rugs hung over it, which is in front of the spectators, and six by the bodies of gladiators lying in the arena, apparently without any regard to the requirements of order, just where they have been slain. Besides this, in the same picture one can count, including all that can be seen in pilasters, pillars, doors, etc., almost sixty of these lines that are perpendicular. Among the figures of the spectators, at least six extended arms are exactly parallel; so is the dirk, the shield, and one leg of the principal figure; and his arm that holds the dirk is exactly parallel to the extended arm of his antagonist who is at his feet.

Symmetry may be defined as the general result in

organic form that follows a due regard for *central-point*, *setting*, and *parallelism*. It is caused often by a balance, by way of parallelism, of all the features that are on either side of a common centre. Symmetry involves thus the conception of many pairs of balancing features. In this sense the word symmetrical is applied by way of designation to certain paintings, especially those of the early Italians, in which there are precisely as many figures on one side of the principal figure as on the other side. Notice Fig. 8, page 96. The principle of *variety*, however, which we find everywhere illustrated in nature and in art must not be supposed to be entirely inoperative in connection with symmetry. The two sides of even a very symmetrical tree do not exactly correspond, and a tree depicted in art is most apt to have the appearance of life, if the same be true of it. The two sides of a man's body are more nearly alike than those of a tree; but in the degree in which he possesses life and consequent grace, they will, while suggesting likeness, be made unlike by the positions which he assumes. Notice the gladiator in Fig. 4, page 41. The same must be true, to some extent, of a building. As was said on page 293, the dignity of effect demanded in public edifices may sometimes necessitate absolute similarity on both sides of the centre, as in the "Taj Mahal," Fig. 53, page 281; Fig. 79, page 354, or "St. Mark's, Venice," Fig. 34, page 227. But graceful effects, such as are desirable in household architecture, may sometimes be best secured by difference, as in the villa in Fig. 55, page 291, or in the church in Fig. 56, page 292.

The art-grouping which corresponds to the classification which results from connecting objects because of like effects produced upon the *senses*, *i. e.*, upon the ears and

eyes, is termed *repetition.* *Alteration* is the form of variety which prevents monotony when using repetition, and *alternation* that which produces effects of repetition at the same time with those of variety. It is hardly necessary to illustrate these methods or their importance. Repetition has already been noticed on pages 269 to 575. It can scarcely be mentioned here without suggesting at once a reason for the motives, measures, phrases, lines, verses, alliterations, assonances, and rhymes of music and poetry. All these illustrate, too, both *alteration* and *alternation.* Notice this motive from Beethoven's Sonata in D min. Op. 31, with imitation in contrary motion:



Every measure in poetry, too, has its alternating accented and unaccented syllables, and its upward and downward tones. Notice also in this single couplet, the *alliterations* (like consonant sounds), *assonances* (like vowel sounds), and also the *alterations* as well as *alternations* between *hounds* and *horn* and *rouse* and *morn.*

> Oft listening *how* the *hou*nds and h*orn*
> Cheerily *rou*se the slumbering m*orn.*
>
> *L'Allegro: Milton.*

As for the application of these methods in the arts of sight, it is only necessary, in addition to what was said on pages 279 and 280, to recall for the reader the artistic effects in common fringe or in a picket fence, or in a row of columns, or of buttresses, or of like windows, or of trees, to cause him at once to recognise the importance in all forms of artistic elaboration of *repetition* not only, but also—as in like intervening spaces—of *alteration* and *alternation.*

Now let us consider the methods on page 277 termed *massing*, *interspersion*, *complication*, and *continuity*. *Massing* is the result of *repetition* when many like features are brought together in order to form a *central-point* of interest. In music, it is this, as exemplified in the accumulations of the effects of the same notes, chords, or instruments, that enables us to recognise the peculiarities distinguishing passages that are loud or soft, forcible or light, gay or pathetic; while without it and its reiterated repetitions, the musical cadence or climax as heard at the ends of compositions or of prominent movements, would produce little impression. In poetry, massing is illustrated in passages in which all the qualities that render an object or character distinctive seem summed up, as in the following:

> What a piece of work is man! How noble in reason! How infinite in faculties! In form and moving how express and admirable! In action how like an angel! In apprehension how like a god!
>
> *Hamlet, ii., 2: Shakespeare.*

The term *massing*, together with the term *breadth* which latter seems to indicate that which is the result of the former, is applied more commonly to effects in the arts that are seen than in those that are heard. Some seem to suppose, too, that both terms should be confined to effects connected with light and shade whereby bright features are put with bright, and dark with dark. As a result of such arrangements, a *breadth* of distance seems to separate the objects in light from those in shade, and a corresponding *breadth* of view seems to be afforded him who sees them; hence the term *breadth*. In securing this effect, the artist does not arbitrarily make objects bright or dim in order to have them correspond to the bright or dim parts of the picture in which he

wishes to place them. He exercises ingenuity and skill in arranging his materials so as to bring into the light objects that in nature are bright or dim, or that can be made so in nature by the presence or absence of an illuminating agent. Besides this, too, he arranges the light so as to fall where it will prove most effective. In Titian's "Entombment," it is made to illumine a figure in the foreground, notwithstanding the fact that the sun is represented as setting in the background. The painter produces the effect by supposing the sun's rays to be reflected from a cloud in advance of the field of vision. Notice also what was said on page 290 of the way in which the light is massed by Rubens in his "Descent from the Cross" (Fig. 1, frontispiece), and by Correggio in his "Holy Night." Effects of light and shade, especially of those produced thus through massing, are usually treated by writers upon art under the term of *chiaro-oscuro*, or *chiaroscuro*.

It is not to be supposed, however, that, in any given picture, there may not be more than one place where there is light and one place where there are shadows. According to Reynolds (Note xxxix. on "The Art of Painting"), there may be three masses of light, one of which, however, he would make more prominent than the other two, thus causing all three together to fulfil the methods of both *principality* and *balance*. "Pictures," says S. P. Long in his "Art, Its Laws, and the Reasons for Them," Essay VI.,—"Pictures possessing breadth of the general light and dark or shade are not only very effective, but they likewise give great repose to the eye; whereas, where the lights and darks are in small portions, and much divided, the eye is disturbed and the mind rendered uneasy, especially if one is anxious to under-

stand every object in a composition, as it is painful to the ear, if we are anxious to hear what is said in company, where many are talking at the same time. Hence . . . the reason why portraits make a more pleasing picture when but few objects are introduced into the composition than when the person is covered with frills and ruffles, and the background stuffed like a 'curiosity shop.' " Concerning the same subject Ruskin says in his "Elements of Drawing," Letter III.: "Such compositions possess higher sublimity than those which are more mingled in their elements. They tell a special tale and summon a definite state of feeling. We have not in each gray colour set against sombre, and sharp forms against sharp, and low passages against low; but we have the dark picture with its single ray of relief; the stern picture with only one tender group of lines; the soft and calm picture with only one rock angle at its flank, and so on."

Both these quotations show that their writers include among the effects of massing those of outline as well as of colour. Thus interpreted, we may perceive how the effects may be produced both in sculpture and in architecture. In the latter, an exact correspondence to massing in painting may be perceived in some of the older castles and even churches of Europe, where all the decoration connected with the forms is concentrated about a tower, or a gateway, or a door, or all of these together, on each side of which is merely a wall entirely blank or pierced with non-ornamental openings.

There is no necessity for dwelling in this place upon *interspersion*. In all the arts it is the opposite of massing, and is sufficiently illustrated in what is said on pages 181 and 182 of the *picturesque*. The term *complication*, like

parallelism, *continuity*, and many others that are used in art, is borrowed from the relationships of lines. It means a folding or blending together primarily of these, but, secondarily, of any forms. Evidently, too, it involves, like *massing*, the presence in large quantities of the features to which it is applied. In fact, the greater the number of themes or phrases, say, in a symphony, the more complicated, as a rule, are its movements; and the greater the number of trees or rocks in a landscape, the more complicated, as a rule, are the factors composing it. But while this is true, these factors, if complicated in an artistic manner, may always be presented in a certain order. "When," says Charles Blanc, in his "Ornament in Art and Dress," "the surface ornamented according to Arabian taste has no dominant subject indicated by its isolation or by its colour, the spectator has only before him an assemblage regularly confused of triangles, lozenges, wheels, half-moons, trefoils, imperfect pentagons, and unfinished meanders, which penetrate, intersect, balance, and correspond to each other, approach to retreat, and touch one moment to depart the next, and dissolve themselves in a labyrinth without outlet and without end. The Arabs have thus realised the strange phenomenon which consists in producing an apparent disorder by means of the most rigid order."

If we allow any single feature entering into *complication* —one of its lines, say—to be interrupted as it must be wherever an application of the method of *interspersion* causes another feature or line to cross it and for a time to take its place, that which conveys to us an impression of *unity* notwithstanding *interspersion* is the reappearance of the feature or line that has disappeared. This continued reappearance of the same line or feature is an

effect of *continuity*. *Continuity* makes a composition which begins in one way, in either time or space, keep on in the same way to its end. Just as *symmetry* tends to cause all parts of an outlined form to be equally balanced about a common centre, *continuity* tends to cause them all to be equally connected with a common mass or materiality. All musical or poetical compositions, especially those of the latter that have occult and intricately developed plots, manifest, of course, more or less of *complication* and a tendency to *interspersion*. The important matter, in such cases, is to have one aim so running through and pervading the parts that all can be recognised to have *continuity*. Here is a very literal example of both complication and continuity in poetic form:

Here we are riding the rail,
  Gliding from out of the station;
Man though I am, I am pale,
  Certain of heat and vexation.

Gliding from out of the station,
  Out from the city we thrust;
Certain of heat and vexation,
  Sure to be covered with dust.

From En Route, A Pantoum by Brander Matthews.

In the arts of sight, the idea to be specially held in mind in connection with *continuity* is that it is an element of unity. So if in a foreground there be a row or group of trees stretching backward interrupted by a plain, it is well if, farther back, the same line of direction be carried on, if not by trees, then, say, by a river, and still farther in the extreme distance, by the side of a hill or by a path upon this hill. See the way in which such lines are continued across the entire canvas in Turner's "Decline of Carthage," Fig. 57, page 309. Similar

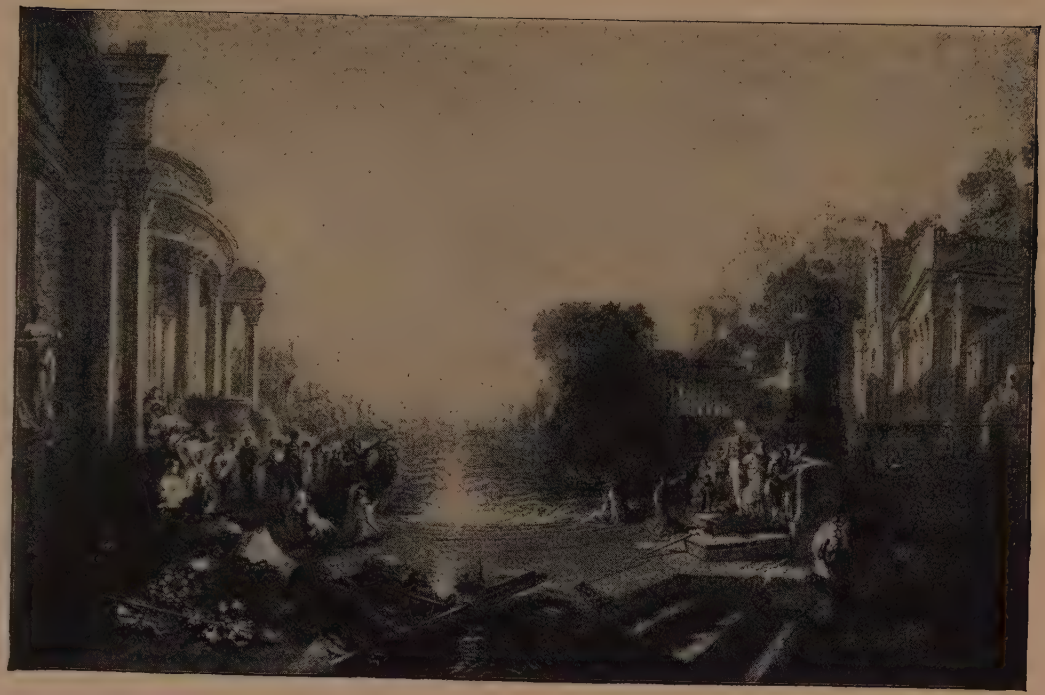


FIG. 57.—DECLINE OF CARTHAGE —TURNER.

See page 308.

arrangements may characterise figures as represented in either painting or sculpture. Notice this in the directions taken by the different limbs of the figures in the "Laocoön," Fig. 19, page 123. In architecture, every one must have observed that, as a rule, we derive much satisfaction from a building in which the window-caps in the same story and the window-sides in all the stories form together one often interrupted, but yet continuous line. Notice the University at Sydney (Fig. 21, page 127); also the lines in the groined ceiling in Beverley Minster (Fig. 51, page 266).

The art-grouping which corresponds to the classification which results from connecting objects because alike in part by way both of *congruity* and of *repetition* is termed *consonance*. This word is borrowed from music, and it applies to the conditions which we now wish to represent by it far more exactly than those who first used it supposed. A consonant tone goes with another in art, not only because men have found the two *going together* in that which, when heard in nature, is termed harmony; but also, as will be shown on pages 362 to 365, because the one tone is in part actually *repetitious* of the other, both being compounded in part of like tones.

It may be well to add here, in illustration of these different methods of likening factors, that *congruity* might cause the artist to associate in a product things as different essentially as rouge on a cheek and blondined hair, or a hunting song and the sound of a horn; that *repetition*, on the contrary, would demand as much likeness as in the allied factors of a piece of fringe, or of a picket-fence; while *consonance*, half-way between the two, would be satisfied were he to unite sounds as different in some regards as are those of the flute, the trumpet, the

violin, and the drum, or shapes as different in some regards as are those of a chimney and a tower, or a window and a porch. In architecture, a porch or a bay-window on one side of a building, and a wing or hot-house on the other side of it, might be alike by way of *congruity*. Windows and doors of the same sizes and shapes would be alike by way of *repetition;* but merely a similar pitch of angles over windows and doors and in the gables of a roof above them, would be enough to make all alike by way of *consonance*.

Dissonance need not be discussed here. It is the opposite of *consonance* in the same sense in which *variety* is the opposite of *unity*, and *confusion* the opposite of *order*. In music, dissonant effects are introduced through the use of gongs and drums and occasional chords of the seventh or the ninth, which last are made features of harmony through the counteracting influence of *interchange*. This latter is exerted in fulfilment of a principle explained on page 365 of this volume, in accordance with which, when one chord passes into another, at least one note in both chords is, as a rule, the same.

Interchange in painting is thus illustrated by Sir Joshua Reynolds. "If, in the 'Bacchus and Ariadne' of Titian," he says," we supposed two bits of colour omitted, namely, the red scarf of Ariadne in the upper and colder portion of the picture, and a blue drapery on the shoulders of a nymph in the lower and warmer portion, it would leave the composition divided into two masses of colour, the one hot and the other cold; the warm portion comprehending the reds, yellows, and browns of the foreground, and the cold portion comprehending the blues, grays, and greens of the sky and trees; and this, as in the rainbow with the green omitted, would be pro-

ductive of great breadth, but it would be destructive of union and consequently of harmony, for it would leave the cold and warm colours as entirely unconnected as though they were separate designs on one canvas. To correct this, and restore the union, Titian has carried up the warm tints of the foreground into the sky or cold portion of the picture by means of the red scarf on the shoulders of Ariadne, and brought down the cold tints of the sky into the foreground by the blue mantle on the shoulders of the nymph in the lower or warmer portion of the picture; and thus, by dividing the painting into masses of warm and cold colours has preserved the greatest breadth; by the opposition of warm and cold colours has increased their splendour; by exchanging those of one side for those of another, as just stated, has produced union and harmony; and, at the same time, preserved that variety so characteristic of nature's colouring."

The final methods mentioned in the chart on page 277 are *gradation*, *abruptness*, *transition*, and *progress*. By the first of these is meant an arrangement causing one form to differ from a second according to the same mode and sometimes degree in which this second differs from a third, between which and the first the second is situated. In *consonance*, as we have found, forms are never exactly alike; and if, in order to secure the effect of unity, we try to arrange them so as to seem alike, we are necessarily led into *gradation*, a method sustaining, for this reason, the same relation to *consonance* as *principality* to *comparison*, *central-point* to *congruity*, and *massing* to *repetition*. As is the case with all the methods to which it corresponds, *gradation* in art does not exist without its antithesis, which may be termed *abruptness*. By this is meant a sudden unforetokened

change from one theme, key, colour, or outline, to another. Of course, a composition in which there is much of it can have but little unity. In spite of occasional abruptness, however, changes may take place sufficiently in accordance with the tendencies of *gradation* to form a nexus between what precedes and what follows, so that, in spite of the change, every one can perceive the connection of the one part with the other. This nexus is called a *transition*. Finally, *consonance*, *dissonance*, *interchange*, *gradation*, *abruptness*, and *transition*, all together and in different ways when, on the whole, there is a continued forward movement, result in artistic *progress*.

In music and poetry we find illustrations of gradation in all the elements that enter into sound, namely, time, force, pitch, and quality. We notice it wherever we find great regularity of time or rhythm, with the gradual swelling and sinking, and rising and falling, of the accent and pitch which necessarily accompany such a rhythm. In poetry there is a phase of the method termed *phonetic gradation*. This is produced by an arrangement of vowels or consonants such as to cause their sounds to follow one another in the order in which articulation necessitates the opening of the vocal passages of the mouth more and more from the lips backward, or else more and more from the back of the mouth forward;—more and more, that is, as in the series of vowels in the words *meet*, *met*, *it*, *ate*, *at*, *care*, *but*, *kite*, *are*, *got*, *aught*, *out*, *foot*, *lute*, *boot*, *butcher*, *ooze;* or as in the series of consonants represented by b, (p), m, n, w, v, (f), d, (t), th, z, l, r, j, (ch), g, (k) h; or else as in series of vowels or consonants the reverse of these. In the following lines the *gradation* of vowels on the emphatic syllables is from

what we may term, as thus explained, the front tones to the back tones:

Here where never came, alive, another.
By the North Sea: Swinburn

'T is better to have loved and lost
Than never to have loved at all.
In Memoriam: Tennyson.

Abruptness in music or poetry results, of course, wherever there are sudden interruptions and changes in either theme or form, and of these in either time, force, pitch, or quality, and in either rhythm, melody, or harmony, *e. g.*:

I marched to the villa, and my men with me
That evening, and we reach the door and stand,
I say—no it shoots through me lightning-like
While I pause, breathe, my hand upon the latch.
The Ring and the Book: Browning.

Transition in music is a passage from one key to another. It sometimes necessitates using a series of chords in which there are effects like those of *interchange*, as explained on page 311; and it always necessitates some application of the principle of *gradation*. But besides this it necessitates using certain chords in the new key, and these, too, in a certain order. The reason of this is that the ear has become so accustomed to the order of the notes in the musical scale and of the chords that harmonise them, that it is only when it hears these latter in succession that it can recognise in what key the music is or, if there have been a transition, to what key this has been made. In the music on page 364, illustrating the common method of making transitions from the major key of C natural to all the other keys, it will be noticed that every chord in the transition carries out the princi-

ple of putting like with like by containing at least one note which is the same as one in the preceding chord. Every chord, too, immediately preceding that of the key-note of the new key contains either the *re* which, in singing down the scale, or the *si* which, in singing up the scale, naturally comes immediately before the *do*, *i. e.*, before the key-note. See page 363.

There is no need here of emphasising the importance of progress either in music or in poetry. We pass on to consider *gradation*, *abruptness*, *transition*, and *progress* as manifested in the art of sight. First, as exemplified in the use of colour. Owing to the operation in outline, distance, and texture, of light and shade and of variety, there is hardly a square inch in the field of vision in which the colours appear to be absolutely the same. To quote from Rood's "Modern Chromatics": "One of the most important characteristics of colour in nature is the endless, almost infinite, gradations which always accompany it. If a painter represent a sheet of paper in a picture by a uniform white or gray patch, it will seem quite wrong, and cannot be made to look right till it is covered by delicate gradations of light and shade and colour. Ruskin, speaking of gradation of colour, says: 'It does not matter how small the touch of colour may be, though not larger than the smallest pin's head, if one part of it is not darker than the rest, it is a bad touch.'" Notwithstanding the constant application in art of the principle of *gradation*, there are occasional places in which one colour needs to be sharply contrasted with another, and this necessitates the effect termed *abruptness*. *Abruptness* is always present, for instance, when an object in bright light is placed, as is frequently the case, against its own shadow. (See Fig. 2, page 3.) In Rembrandt's

"Woman Accused by the Pharisees," the woman accused is robed in white and in the centre of the chief light. Her accuser stands at her side clothed in black. Of course, we have here, necessarily, the greatest possible *contrast* and *abruptness*. But evidently this does not interfere either with the most exact fulfilment of the principles of *complement* and *consonance* or with the most delicate kind of *gradation* used as a principal and general method.

Gradation is manifested also in the use of lines, as, for instance, in series of curves and angles, the different sides of which in regular degrees make a transition from exact parallelism. In his cartoon depicting "The Death of Ananias" (Fig. 37, page 233), Raphael causes the terror of the principal figure to be manifested in similar attitudes of the figures on both sides, but as they gradually recede into the background, their expressions and attitudes become less and less indicative of the feeling at the centre of interest. In fulfilment of the same method, both in painting and in sculpture, the hundreds of curves that together constitute the contour of the human body are made to pass into one another, causing its members gradually to expand or taper. Yet there are places, as at the heel, where the transitions are very *abrupt*. The number of these is often increased with great effect by the introduction, in connection with both living figures and of foliage, of scarfs, bands, girdles, and folds in the drapery, or of rectangular lines of architecture which in pillars, entablatures, niches, and pedestals surround or support the figures. (See Fig. 22, page 167.)

Both these methods have a place, too, in architecture. All must have noticed that perpendicular lines when carried into the air, as in the case of two sides of a square

tower, seem to approach each other; also that when two sides of a roof actually touch, they support each other Evidently, artists are only carrying out hints from these facts when they widen the sides of a tower's base and make them narrower at the top, thus increasing its apparent height; or when they cause the sides actually to meet in the spire or steep gable at its top, thus increasing also the ease of construction. Many great buildings, like the cathedrals and palaces of Europe, are designed according to the first of these methods. The basements are made visibly broader than the superstructures, and the lines of enclosure, as they are carried up at both sides, are gradually brought nearer together. See Cologne Cathedral, Fig. 33, page 226. The method of gradation is illustrated also in those cases so frequent in Gothic architecture (see again Fig. 33), in which over the same opening a round arch is used immediately below a pointed arch; also in some great buildings in which the arches over the openings of the first story are nearly horizontal, those of the second or third more rounded, and those of the upper story pointed.

Turning now to *progress*, it is comparatively easy to understand how this may be secured in poetry and music, the forms of which consist of words and sounds necessitating movement. But in painting, sculpture, and architecture there is no literal movement. Nevertheless, in these *progress* may be suggested. That which is represented in Raphael's "Death of Ananias" (Fig. 37, page 233) could take place at one moment of time. Yet at this moment the idea, forcibly impressing those nearest the principal figure, has not taken possession of those remote from him. The picture represents, therefore, different stages of *progress* in the development of the

idea, or of the influence exerted by it; and it is almost impossible to conceive of any painting or statue, however small, in which the *progress* of the idea in its advance to take possession of the whole body of the subject or subjects might not be represented in an analogous way.

Nor is it less possible to represent the effects of *progress* in buildings. In many of the English cathedrals the whole development of Gothic architecture from the Norman, through the pointed, decorated, and perpendicular, can be traced literally in the different forms used in different parts. But progress in such a literal sense is not consistent with *unity*. When, according to the method of *gradation* described a moment ago, one form of arch is used above the lower openings, and another sharper development of the same over higher openings, and another still sharper over the highest, we have a representation of progress of a more desirable kind. So, too, we have the same in the interior of a cathedral, when the arches above seem to grow like limbs of trees out of the shafts below them, and when the chancel beyond the nave, to which so many lines of the walls and ceiling point, seems, with its finer elaboration of the resources of outline and its grander wealth of colour in window and altar, to burst upon the vision like a flower, for which all the rest has furnished only a splendid preparation for unfoldment. In these and other ways, there are buildings so constructed that they seem to be almost as much the results of *growth* and, in this sense, of *progress* as do products of nature with which we are accustomed to associate the two.

At the opening of Chapter XIV., it was shown that the first efforts of the mind in the direction of art-composition are made for the purpose of securing effects of

unity, in order to accommodate the result to the requirements of human conception. It was shown also that the occasion for these efforts arises from the *variety* everywhere characterising the natural forms of which the artist is obliged to construct his products. Everything that has been unfolded since this was said, has had to do with methods of arrangement through which factors of a form, while exhibiting *variety*, can, nevertheless, be made to exhibit *unity*. But in none of these methods has there been necessitated such an absolute blending of the appearances of the two as in *progress*. In this the *variety* which in most of the arrangements is accepted as a necessary and accidental evil becomes essential. There can be no *progress* except of something that is clearly recognised to be a *unity*. But it is equally true that there can be none except as that which is a *unity* is perceived to be characterised by *variety* also. In *progress*, therefore, all the methods of art-composition that we have been considering seem to culminate. Before leaving this subject it would be well for the reader to recall what was said on page 33 with reference to the relation between art-composition as explained in Chapters XIV. and XV. and the requirements of beauty as discussed in Chapter II. An examination of the Appendix, too, page 387, will reveal that all these methods of composition fulfil exactly the underlying condition of *assimilation* which the great majority of physiological psychologists deem requisite tc the effects of beauty.

CHAPTER XVI.

RHYTHM AND PROPORTION.

Rhythm not Originated by Art—It Exists in Nature—In Nerve Action—Required by the Natural Action of the Mind—Elements of Rhythm Existing in Speech—How Developed in Metre and Verse—In Music—Poetic Measures—General Comment—Meaning of Proportion—Result of a Natural Tendency to Make Like Measurements—Manifested Everywhere—Proportion in Nature—An Important Art-Principle—Result of Comparing Measurements not Actually Made, but Possible to Make—Not Actually Alike, but Apparently so—Proportion Puts Like Measurements with Like—Fulfilling Principles in Chapters XIV and XV.—Why Proportional Ratios must be Represented by Small Numbers—How Larger Numbers may be Used—Rectilinear Proportions—Of Allied Rectangles—Of Irregular Complex Figures—Must be Accompanied by Outlines of Simple and Regular Figures—Proportions of Human Form and Clothing—Countenance—Greek Type of Face not the only Beautiful One—Why Other Types may Seem Beautiful—Proportions of Human Body Indicated by Circles and Ellipses—Binocular Vision—Its Relation to Ellipses—Why the Curve Is the Line of Beauty—Shapes of Vases—Relation of Like Curves to Proportion Illustrated in Curves of the Human Form—Conclusion.

ACCORDING to the chart on page 277, the methods of art-composition indicated in it result, as applied to duration, in *rhythm;* as applied to extension, in *proportion;* and, as applied to quality and pitch, whether of note or colour, in *harmony.* Of these, let us consider, first, *rhythm.* Art did not originate this, nor the satisfaction derivable from it. Long before the times of the first artists, men had had practical experience of its pleasures. Long

before the age of poetry, or music, or dancing, or even of fences or schoolboys, the primitive man had sat upon a log and kicked with his heels, producing a rhythm as perfect, in its way, as that of his representatives of the present who in Africa take delight in stamping their feet and clapping their hands, and in America in playing upon drums and tambourines, in order to keep time to the movements of dancers and the tunes of singers.

When we come to ask why rhythm should be produced thus, either by itself or in connection with poetry or music—in short, why it should be, as seems to be the case, a natural mode of expression, we cannot avoid having it suggested, at once, that it corresponds to a method characterising all natural movement whatever, whether appealing to the eye or ear, or whether produced by a human being or perceived in external nature. There is rhythm in the beating of our pulses, in the alternate lifting and falling of our chests while breathing, in our accenting and leaving unaccented the syllables of our speech, in our pausing for breath between consecutive phrases, and in our balancing from side to side and pushing forward one leg or one arm and then another, while walking. There is rhythm in the manifestations of all the life about us, in the flapping of the wings of the bird, in the changing phases of its song, even in the minutest trills that make up its melody, and in the throbbings of its throat to utter them ; in the rising and falling of the sounds of the wind, and of the swaying to and fro of the trees, as well as in the flow and ebb of the surf on the seashore, and in the jarring of the thunder and the zigzag course of the lightning. In fact, rhythm seems to be almost as intimately associated with everything that a man can see or hear, as is the beating of his own heart with his own life. Even

the stars, like the rockets that we send toward them, speed onward in paths that return upon themselves, and the phrase "music of the spheres" is a logical as well as a poetical result of an endeavour to classify the grandest of all movements in accordance with a method which is conceived to be universal. No wonder, then, that men should feel the use of rhythm to be appropriate in art-products modelled upon natural products. No wonder that, connected as it is with natural movement and life and the enjoyment inseparably associated with life, it should seem to the civilised to be—what certainly it seems to the uncivilised—an artistic end in itself.

Nor is this view of it suggested as a result merely of superficial observation. It is substantiated by the more searching experiments of the scientists. There have been discovered, for instance, in addition to the regular beat of the heart, and independent of it, rhythmical contractions and expansions of the walls of the arteries, increasing and decreasing at regular intervals the supply of blood. Such processes, which, according to Foster in his "Physiology," page 307, may be observed in the arteries of a frog's foot or a rabbit's ear, may be checked by cutting the nerves connecting it and the vaso-motor system ; and this fact is taken to indicate that there is a rhythmic form of activity in the nerve-centres themselves. Regular periodic contractions have been observed, too, in the hearts of certain animals after being removed from the body ; and this fact has been attributed to the presence in them of nerve-ganglia, acting according to some characteristic method. Movements of the same kind are mentioned, also, by Isaac Ott in his "Observations upon the Physiology of the Spinal Cord," in "Studies from the Biological Laboratory of Johns Hopkins Uni-

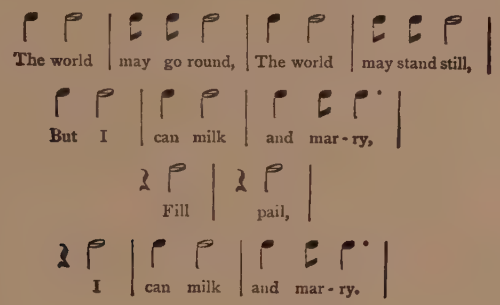
versity," No. II., as taking place in certain parts of the bodies of dogs, cats, and rabbits after the severing of the spinal cord.

Such facts with reference to the rhythmic character of nerve-action seem to indicate a possibility of the same in mental action. Acting upon this suggestion, Dr. Thaddeus L. Bolton, Demonstrator and Fellow in Clark University, conducted, a few years ago, a series of interesting experiments, which are described by him in a thesis on "Rhythm," published in the *American Journal of Psychology*, vol. vi., No. 2. "The first and most important object" of these experiments is said to have been to determine "what the mind did with a series of simple auditory impressions, in which there was absolutely no change of intensity, pitch, quality, or time-interval." As a result it was found that, out of fifty who were asked to listen to clicks produced by an instrument prepared for the purpose, two alone failed to divide these clicks into groups, the number in each group being determined, mainly, by the relative rapidity with which the clicks were produced. The groups were usually of twos or threes, though, with greater rapidity, they passed into groups of fours, sixes, and eights, always, however, when the members were many, with a tendency to divide into twos, threes, and fours. It was found, moreover, that, whenever a second, third, or fourth click was made louder than the others, the inclination to divide the clicks into corresponding groups of twos, threes, or fours was increased.

With such facts in mind, let us recall that speech, from which we have found both music and poetry to be developed, is composed of syllables, each uttered with an individual stress which separates it from other syllables.

Besides this, every second, third, or fourth syllable is invariably accented. The reason for the accent is physiological. The vocalised breath flows through the throat —as water through the neck of a bottle—with what may be termed alternate active and passive movements. The former of these movements is that which produces the accent. In our language all words of more than one syllable have come to have an accent that is fixed. This fact enables one to arrange any number of words so that the fixed accents shall fall, as natural utterance demands that it should, on every second, third, fourth, or fifth syllable. But speech has another characteristic. Besides being separated into small groups by the accents, the syllables and the words which they contain are separated into larger groups by the necessity experienced of pausing at certain intervals in order to draw in the breath. Nature, therefore, furnishes speech with two characteristics,—accents after every two, three, four, or five syllables, and pauses after every few words.

Now, suppose that we apply to these accents and pauses the methods of art-composition that were explained in Chapters XIV. and XV.; in other words, the methods tending to produce effects of unity by grouping like with like,—what will be the result? What but *metre* and *versification* which are the two constituents of rhythm? The accents, together with the syllables grouped with them, give rise to what in music are termed *measures* or *bars*, and in poetry to what are termed *measures* or *feet*, and the pauses for breath give rise to musical *phrases*, or poetic *lines of verse*. The essential characteristic of bars or feet is that they are measures and that what they measure is time. For this reason, if the accents about which notes or syllables are grouped occur at

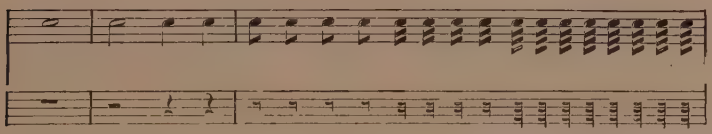
exactly regular intervals of time, it is immaterial whether the measure contain one note or syllable or many. This is true even in poetry, though the fact is frequently overlooked. Notice both music and words in the following:

The Milkmaid's Song: Sidney Dobell.

Also that each syllable in the first line of the following fills an entire measure:

Bréak, bréak, bréak,
On thy cóld gray stónes, oh séa.
And I wóuld, that my tóngue could útter
The thóughts that aríse in mé.

Break, Break, Break: Tennyson.

This principle is invariably exemplified in music. Notice how many more notes are in the third than in the first measure of the following:



Here, taken from W. S. B. Mathew's "Primer of

Musical Forms," are representations of the more important types of musical rhythm:

Polonaise $\frac{3}{4}$

Polka $\frac{2}{4}$

March $\frac{4}{4}$

Waltz: (Slow) $\frac{3}{4}$

(Quick) $\frac{3}{4}$

(Moderate) $\frac{3}{4}$

Galop $\frac{2}{4}$

Boléro $\frac{3}{4}$

or $\frac{3}{4}$

Also sometimes the same as the Polonaise given above.

Presto.

Tarantelle $\frac{6}{8}$

In poetry, largely because this art is unable to make as much as music can out of the effects of pitch and quality, it is not customary to vary greatly the number of syllables in successive measures. Often, in long poems, these remain exactly the same from the first line to the last. The ordinary poetic measures are as follows:

Initial or initial double measure is accented on the first syllable, and corresponds, if composed of one long sylla-

ble followed by one short, to the Greek trochee or choree; if of two long, to the Greek spondee.

Whèn the | hòurs of | dày are | nùmbered.

Terminal or terminal double measure is accented on the second syllable, and corresponds, if composed of one short followed by one long syllable, to the Greek iambus.

Amòng | thy fàn | cies, tèll | me thìs.

Initial triple measure, if composed of one long followed by two short syllables, is the same as the Greek dactyl.

Òut of the | cities and | into the | vìllages.

Median or median triple measure, *i. e.*, triple measure with the accent on the middle syllable, if composed of one short, one long, and one short syllable, is the same as the Greek amphibrach.

There càme to | the shòre a | poor èxile | of Èrin.

Terminal triple measure, if composed of two short syllables followed by a long one, is the same as the Greek anapæst.

If our lànd | lord supply | us with bèef | and with fish.

Compound or compound triple measure is accented on the first and third syllables, and, if composed of one long, one short, and one long syllable, is the same as the Greek amphimacrus.

Nèarer mỳ | Gòd to thèe | È'en tho' ìt | bè a cròss.

Initial quadruple measure is a duplicated form of initial double measure, and is usually the same as the Greek ditrochee, *e. g.*:

Ròses àre in | blòssom ànd the | rìlls are fìlled with | wàter-crèsses.

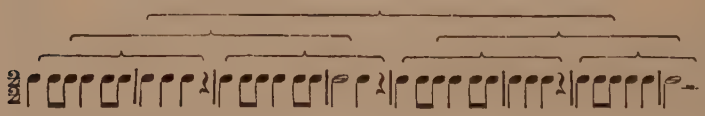
Terminal quadruple measure is a duplicated form of

terminal double measure, and is usually the same as the Greek diiambus, *e. g.*:

The kìng has còme | to màrshal ùs.

To indicate the number of the measures placed in a single line, the Greeks used the terms *monometer*, meaning a line containing one measure, and *dimeter*, *trimeter*, *tetrameter*, *pentameter*, *hexameter*, meaning, respectively, a line of two, three, four, five, and six measures.

It is not important in this place to consider the representative effects either of these different measures, or of different musical phrases or poetic lines. These subjects have been treated at length in the author's "Poetry as a Representative Art," and "Rhythm and Harmony in Poetry and Music." In closing, however, it may be of interest to observe the close resemblance between the impression conveyed by the movements of musical measures when connected with phrases and of poetic measures when connected with lines. The following from Weber's "Theory of Musical Education" may represent the general effect of the former of these no more clearly than of the latter:



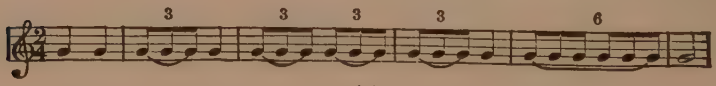
We now turn to *proportion*. When we say that a house has the proportions of a palace, or a growing boy the proportions of a man, we may mean merely that the one is as large as the other, or has the same general measurements. In addition to this, however, there is generally connected with the term, when carefully used, a conception of a comparison of measurements. A part of a

product is said to be "in proportion" because of the relationship which its measurements sustain to the measurements of other parts or of the whole. This seems to be the meaning when we speak of the proportions of the human figure, irrespective of any references to attempts to copy any particular model; and it certainly is the meaning when we speak of the proportions of a building in a style such as has never before had existence. As an effect produced thus by measurements, it is evident that proportion bears a relationship to the arts of sight similar to that borne by rhythm to the arts of sound. Just as, in rhythm, pauses separate syllables or notes, and, aided by the absence or presence of force in the accents, divide the whole duration of a series of sounds into like parts or multiple of parts; so, in proportion, it is possible for lines to separate objects of sight, and, aided by light and shade revealing their shapes, to divide the whole extent of space covered by a series of forms into like parts or multiples of parts.

But if it be possible to divide spaces thus, is it probable that any or many will care to do this? The moment that the question is asked, it will be found to admit of but one answer. Such a method of measuring spaces is not only probable, but inevitable. Apparently the mind in arranging different objects of sight, or in judging of their effects as it finds them arranged, cannot avoid making these measurements. None of us can look at window-panes, doors, or façades of buildings, without comparing the lengths and breadths of each. It is true that we do not always compare them consciously. But if one dimension be greater than another, we usually perceive the fact, and form an estimate as to how much greater it is. After a most limited glance at a building, we describe it to

others by saying that it is twice or three times, as the case may be, as long as it is high. Or, to notice the tendency when exemplified in action, between which and the mental processes necessitated in art the correspondence is more complete, suppose that one be framing an engraving occupying the centre of a sheet, about which centre there must be a margin on all sides. Even if he have never seen a picture framed before, forty-nine times out of fifty he will place the engraving so that, intervening between it and the frame, there shall seem to be, to his eyes, an equal amount of space on every side of it, or, at least, on opposite sides of it. Or, if the picture must be hung on a wall between two doors, he will hang it so that, to his eyes, there shall seem to be an equal distance between the frame and each door. Even children, if building houses of blocks, will select blocks of similar size to be put in corresponding places at different sides of the same windows and porches.

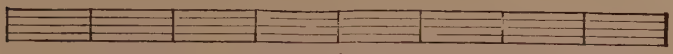
An analogous fact is true universally, and always has been true. There is no primitive kind of ornamentation, no matter how barbarous the race originating it, of which one characteristic, perhaps the most marked, is not an exact division or subdivision of spaces, the mind, apparently, deriving the same sort of satisfaction from rude lines of paint and scratchings upon stone, made at proportionate distances from one another, that it does from the rhythmical sounds (see Fig. A) drummed with feet,



(A)

hands, or sticks, to accompany the song and dance of the savage. In fact, an arrangement, as in the staves

and bars that follow, might be used as preparatory either for writing music or for decorating with colour—*i. e.*, for the purpose of representing either rhythm or proportion. (See Fig. B.)



(B)

It is not because it is convenient but because it is artistically satisfactory, that, in all sorts of decorative work, whether upon stone, wood, paper, or cloth,—from the finishing upon the ridge-pole of a roof to the lace and fringe upon a window curtain, and the patterns upon carpets and wall-papers,—outlines often differently subdivided, but nevertheless alike in that they cover like spaces, are put together. Nor is this tendency exhibited in merely those departments of art in which the mind works upon forms originated almost wholly by itself. It is found also in forms which, with more or less literalness, are copied from nature. Just as poetry can take words and phrases, actually heard in conversation, and rearrange them in such ways as to fulfil the requirements of rhythm, so painting and sculpture can take outlines perceived in nature, and rearrange them in such ways as to fulfil the requirements of proportion. Of course, this could not be the case unless, to some extent, the requirements of proportion were fulfilled in nature. Now notice to what extent they are fulfilled in nature. First of all, the sky and earth always divide the possible field of vision into two approximately equal and complementary parts. When the painter composing his picture according to the laws of perspective (see page 93, also Fig. 2, page 3) decides upon the places for his horizon,

his vanishing point, and his principal figures, and upon the distances of these from one another, and from the margins on either side of his composition, as well as upon the sizes and shapes of his trees, houses, men, animals, considered in themselves or in connection with other objects near them or remote from them, he makes his decisions as a result of relative measurements, mental or actual. And so with reference to the different members and the general shape of the human form, or of the forms of animals, trees, plants, or of any objects, in fact, that are transferred from nature to canvas or marble by way of imitation; it is as a result of a certain comparison of measurements between part and part, that one can say that certain of these forms are or are not in proportion. Take, for instance, a very heavy body, either of flesh or of foliage, supported by very slight limbs; should we not say at once that the two were out of proportion? Even of such small details as eyes, ears, hands, and nostrils we should make a similar affirmation, in case abnormal measurements were apparent. And though the relative sizes of these differ greatly in individual instances, they are always in the same body expected to be so related, each to each, and to other members, as to show an effect that can be recognised only as a result of comparing measurements.

At first thought, the action of the mind in making these comparisons may seem to be of little importance, scarcely worthy of the serious attention which evidently we are about to give it. But, in this life, it usually takes very little to start that which may develop into very much. Rhythm, too, is apparently of little importance. If one knew nothing about art, what could appear more absurd than for an intelligent man to think it worth

while, when wishing to say something, to count the syllables that he utters, so that they shall reveal exact divisions and subdivisions of time, such as the savage makes when he beats his hands and feet for dancers. Yet it is out of this simple method of counting, that art has developed the most important element in the form of poetry, as well as an element extremely important in the form of music. When we come to examine the different combinations of effects attributable to rhythm, we find that we are by no means dealing with a subject as simple as at first appeared. The same is true of proportion. Before deciding, for instance, that a foot or a column is disproportionately large or small, it must be compared not only with other feet or columns, but with both the sizes and shapes of all the surrounding features in the man or building in which it appears. Indeed, the number and variety of measurements straight, curved, or angular, that any extensive knowledge or application of proportion involves, are almost incalculable.

Proportional processes may be rendered most intelligible, perhaps, by dwelling for a little upon the correspondence, already many times suggested, between proportion and rhythm. Rhythm has been shown to result from the mind's endeavour, in the sphere of time or duration, to arrange the features of forms by putting like measurements with like. Evidently, it is the same principle that is illustrated in proportion. Just as the mind, when listening through the ear, takes satisfaction in sounds so divided and subdivided as to duration that all can appear to be parts of a *unity*, because all can be measured according to some clearly recognised standard of *comparison;* so the same mind, looking through the eye, takes satisfaction in objects of sight so divided and

subdivided as to extension, *i. e.*, as to size or shape, that these also can be measured and compared. It is important to observe, however, that it is not necessary actually to measure them, as a preliminary step to recognising that they are in proportion. In other words, it is not necessary to determine what the ratio between them is, but merely that it exists. The same principle applies here as in rhythm. To experience the effects of this, we do not need to decide what the metre is—whether initial or terminal, iambic or trochaic—only that there is a metre. But while this is true, the metre must be capable of being analysed; and we must be conscious that it is so, although, perhaps, we ourselves do not care to go through with the analytic process. In the same way, the impression which the mind receives of proportion is due to measurements of which, if it choose, it may become *conscious* as distinguished from those of which, as measurements, it must forever remain *unconscious*. This fact is noteworthy, because, so far as it can be recognised, it enables one to perceive why proportion in the arts of sight, is not, as has been almost universally supposed, the analogue of harmony in the arts of sound. As will be shown in Chapter XVII., harmony is produced in these arts whenever the number of vibrations *per second* determining the pitch of one tone sustains a certain ratio to the number of vibrations *per second* determining the pitch of another tone. But only the investigations of science have been able to discover that this is the reason for the effect. The mind cannot count the vibrations. It is not *conscious* of them; but only of an agreeable thrill or glow in case they coalesce, as they do when they sustain to one another the required harmonic ratio. Now if we go upon the supposition that the measure-

ments determining the effects of proportion are of the same nature as are those determining the effects of harmony, it is evident that we must suppose ourselves dealing with factors of which the mind is *unconscious;* and must remain ignorant until science has come into possession of certain data not yet discovered. Is it any wonder that those accepting this supposition who have tried to explain the effects, have either held that they cannot be explained at all, or have made attempts at explanation which may be said in a general way to have failed to prove convincing? Is it any wonder that, even when acknowledging that the Greeks once had a knowledge of the subject, very many in our own times, after seeking for this knowledge in wrong directions, have conceived of the subject as hidden in almost impenetrable mystery,—as involving principles which it is wellnigh useless for present artists to attempt either to understand or to apply?

It is important to notice, too, that the effects of proportion, as interpreted here, must be ascribed to measurements that are *apparent*, but not necessarily *actual*. One cannot well judge of the relations between the measurements of the parts of a body, or between the measurements of these and the measurements of the whole, except so far as he looks at the body from a distance where all the parts can be compared together. But, as shown on page 102, certain measurements need to be actually different, in order, when seen from a distance, to seem to be alike. Effects of proportion, therefore, are not determined by actual measurements, but by what the measurements appear to be, after perspective and the methods associated with it have made them appear as they do. The principles underlying Greek

proportion cannot, therefore, be ascertained by merely measuring with a tape-line the different members of a Greek façade.

Once more, inasmuch as proportion, like rhythm, is based upon the requirements of composition, it is important to notice that fundamentally, measurements go together because they appear to be exactly alike, that is, as 1 : 1; and that the mind accepts the ratios of certain small numbers that are not alike, like 1 : 2 or 2 : 3, because it is able to recognise in the first that which corresponds to 1 : 1 + 1, and in the second that which corresponds to 1 + 1 : 1 + 1 + 1. Finally, connected with this, it is important to notice that as rhythm starts by putting together similar small parts such as feet and lines, and produces the general effect of the whole as a result of the combined effects of these parts, so does artistic proportion. For instance, the height of the front of the Parthenon is to its breadth as 9 : 14. But we need not consider the architect as aiming primarily at this proportion; or that it is any more than a secondary, though, of course, a necessary result of the relations, the one to the other, of the different separate measurements put together in order to form the whole. If we lose sight of this fact, we may never be able to the end of time to explain why the Greeks used such proportions, in their columns, as 5 : 81, or, in their façades, as 9 : 14.

In view of what has been said in previous chapters of this book, it is easy for us to recognise why the ratio of 1 : 1 should be characteristic of the measurements of the majority, perhaps, of art-products in the realm of sight. Everything that was said of the repetition of like forms on pages 270 to 275 applies equally to like measurements. Whether we compare with one another like features, as

in columns, flutings, windows, mouldings, eyes, arms, legs; or unlike features, as in capitals, friezes, architraves, metophs, triglyphs, foreheads, noses, ears, chins, we find that 1 : 1 is the fundamental proportion from which all other ratios are developed.

It is evident that other ratios can be developed from this in such ways as to make the fact of proportion apparent in only the degree in which the numbers representing the ratios are small. After 1 : 1, the next easiest to recognise is that of 1 : 2, as between the first of the upper and of the lower lines at the left of Fig. 58.

FIG. 58.—LINES IN PROPORTION.
See pages 337 and 338.

Nor is it difficult to recognise the relationship of 1 : 3, as between the second pair of lines in this figure, or of 2 : 3, as between the third pair. But it is evident that as the numbers representing the ratios increase in value, these ratios become less recognisable; as, for instance, when they are as 4 : 5, or as 5 : 7, as between, respectively, the fourth and fifth pairs of lines in this Fig. 58. When, at last, we get to a relationship that can be expressed only by large numbers like 10 : 11, or 15 : 16, the mind is no longer able to recognise even its existence.

There is a way, however, in which one may be made to recognise it, even when represented by comparatively large numbers. This is when, in accordance with the elementary process in proportion of putting like with like, the wholes of the forms that are to be compared are measured off into like subdivisions. For instance, it is far more easy to recognise the relationship of 4 : 5, or at least that there is such a relationship, when it is

expressed as in Fig. 59, below, than when it is expressed as in lines like those in Fig. 58, page 337. Accordingly, like subdivisions when they are indicated as in Fig. 59

FIG. 59.—LINES SUBDIVIDED TO INDICATE PROPORTION.
See page 338.

may show not only the relationship that each subdivision sustains to each other subdivision that measures the same

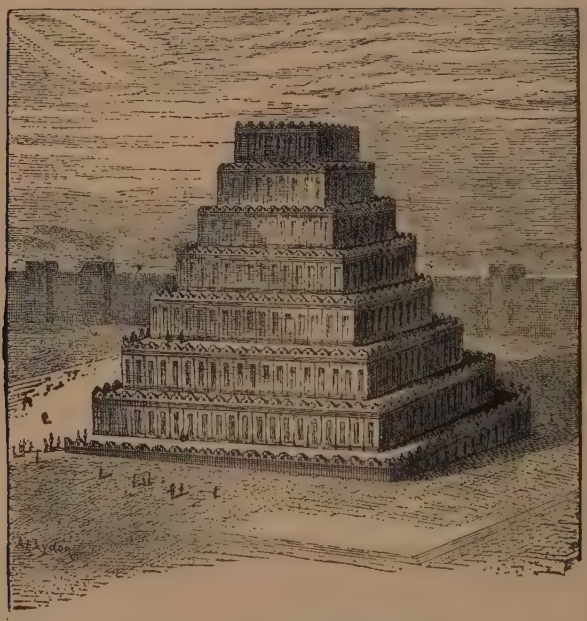


FIG. 60.—TYPE OF AN ASSYRIAN SQUARE.
See pages 340 and 341.

as itself, but the relationship also that whole series of subdivisions sustain to other series of them, which, as

FIG. 61.—CHICHESTER CATHEDRAL.
See page 340.

series, do not measure the same. Thus, the panels in the lower story in the Assyrian tower in Fig. 60, page 338, show that the whole length of each story sustains a certain definite relationship to the whole length of each other story. So, too, the ornamental divisions in the spire in Chichester Cathedral (Fig. 61, page 339) show that the whole spire sustains an exact relationship of 3 : 1 to the square part of the tower visible below it.

We are told by W. W. Lloyd in his "Memoir on the Systems of Proportion," published with Cockerill's "Temples of Ægina and Bassæ," page 64, that all the architectural quantities as made proportionate were estimated by the Greeks chiefly in two ways: by rectilin-

FIG 62.—FIGURES WITH LINES SUBDIVIDED TO INDICATE PROPORTION.
See pages 103 and 341.

ear proportions, *i. e.*, by divisions of one continuous straight line; and by rectangular proportions, *i. e.*, by a comparison of length and breadth, height and width, etc., at right angles. We have considered the first of these ways. In considering the second, we can expect, of course, no change in principle. In case the lines to be compared form adjacent sides of a rectangle, the ratio between the lines must be recognisable in the degree in which it can be expressed in small numbers, 1 : 2, 2 : 3, 3 : 4, etc. Or, if comparatively large numbers be necessitated, they can still be recognised in the degree in

which certain marks suggest them to the eye. Notice this Fig. 62, representing 3 : 5, and 4 : 7. As applied in actual construction also, observe Fig. 60, page 338; and the like horizontal or vertical divisions in Fig. 28, page 219, Fig. 32, page 225, and Fig. 33, page 226.

Of course this method of making lengths and breadths seem in proportion in the same figure can make them seem so in adjacent figures; in other words, it can make one figure as a whole seem in proportion to another figure. If, in such cases, the figures be rectangles, they may be similar in width, and then their relationships may be determined by the ratios of their heights, as in the first three rectangles at the left of Fig. 63. Or if the

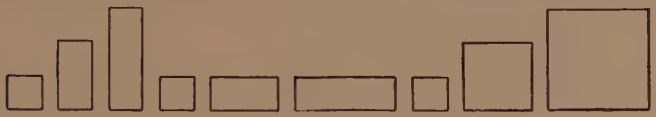


FIG. 63.—RECTANGLES IN PROPORTION.
See page 341.

rectangles be similar in height, their relationships may be determined by the ratios of their widths, as in the fourth, fifth, and sixth rectangles in the same figure. Or, if the rectangles be similar neither in width nor in height, their relationships may still be determined by the ratios, each to each, of both these respective dimensions, as in the seventh, eighth, and ninth rectangles in Fig. 63.

So far we have considered only straight lines and rectangular figures. Of course, there are other figures, and they form a vast majority, that are not composed of lines of this character. It is evident that to compare the measurements of these figures, especially when they differ for different reasons is extremely difficult; not only so but that it is impossible, unless all can be shown to

be allied to some simpler figure which can serve as a standard of measurement. This simpler figure, which is

FIG. 64.—FIGURES RELATED BECAUSE INSCRIBABLE IN THE SAME SQUARE.
See page 342.

just as essential to the determining of like space-dimensions in shape as a yardstick is to the determining of like

FIG. 65.—FIGURES RELATED BECAUSE INSCRIBABLE IN THE SAME RECTANGLE.
See page 342.

lengths, may be either actually outlined at the time of comparing the measurements or only ideally imagined.

FIG. 66.—RELATIONSHIP OF FIGURES AS INDICATED AND AS NOT INDICATED.
See pages 342 and 343.

But whether actually outlined or not, on the principle that things equal to the same thing are equal to one an-

FIG. 67.—FIGURES RELATED BECAUSE INSCRIBABLE IN FIGURES IN PROPORTION.
See page 343.

other, all other figures inscribed in this simpler figure and that touch all its sides can, for this reason, be recognised as related. See Figs. 64, 65, and 66.

It is well to observe, however, that the more complex figures cannot always be recognised as being related, in case the outlines of the simpler figures do not accom-

FIG. 68.—CHÂTEAU DE RANDAU, VICHY, FRANCE.
See page 343.

pany them. The first three forms in Fig. 66, when they are separated from the rectangles in which, in the last three forms, they are shown to be inscribable, do not suggest any particular relationship to one another. Nor would the fifth and sixth, or the seventh and eighth forms in Fig. 67, page 342, were it not for the rectangles in the first and second, with which the figure shows them to be connected. Or, to indicate the practical bearings upon art of this remark, it is conceivable that the different triangles described by the pitch of the gable-windows, roofs, and turrets in Fig. 68, page 343, would all be found to be exactly inscribable in rectangles which, according to what was said on page 342, are in

proportion to one another. But because the rectangles are not visible, and in the circumstances cannot be made visible, the different triangles do not seem to be either in proportion or in harmony. Notice, on the contrary, how the rectangular framings into which are set the arched doors and windows in the middle of the front of the building in Fig. 69, below, redeem the whole from an effect of incongruity and disproportion which, otherwise, might characterise it.

The use of these simpler lines or figures as standards

FIG. 69.—WALKER MUSEUM, CHICAGO UNIVERSITY.—"COSMOPOLITAN" MAGAZINE.
See page 344.

of measurement has a bearing upon the methods of determining the proportions of the human form. Fig. 70, page 345, is divided into eight parts by horizontal lines; and Fig. 71, page 346, shows how such lines can be indicated in the clothing. The first figure to the left shows a division into four equal parts; the next figure to the right of it, a division into five equal parts; and the other two figures, divisions into six equal parts. Fig. 72 shows costumes, fashionable and not fashionable, in which there are no suggestions of equal divisions. A

glance at the results will be enough to reveal their unæsthetic effects, and that these are due to a lack of likeness in measurements.

Now let us apply the same principle to the countenance. Here there are more features like eyes, nose, mouth, and ears, which themselves divide up the spaces,

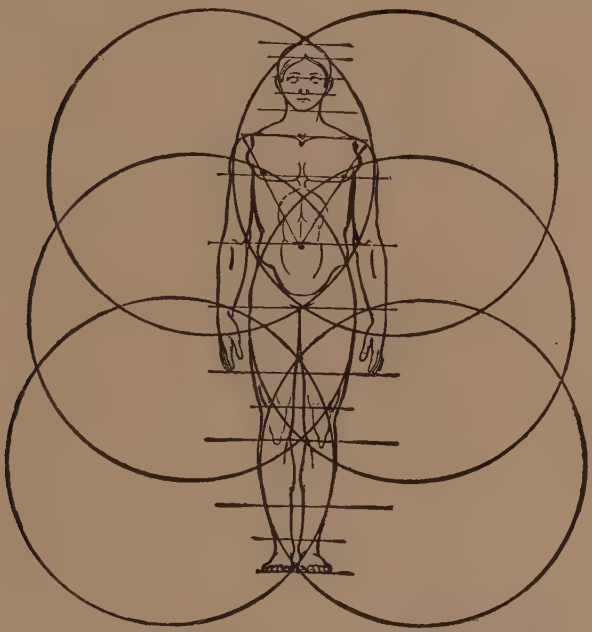


FIG. 70.—LINES AND CURVES INDICATING PROPORTIONS OF A FORM TAKEN FROM PUTNAM'S HAND-BOOK.

See pages 344, 350, 356.

and artificial lines are not so important. If one be facing us, it is wellnigh impossible not to suppose an imaginary vertical straight line drawn from the middle of his forehead to the middle of his chin, as in Fig. 73, page 347, and if we find this line passing through the middle of his nose,

we obtain an impression of regularity which, so far as concerns it alone, is an aid to the agreeableness and consequent beauty of the effect; but in the degree in which

FIG. 71.—COSTUMES DIVIDING HUMAN FORMS PROPORTIONATELY.
See page 344.

the middle of the nose is out of this vertical line, not only irregularity but ugliness is suggested. A similar

FIG. 72.—COSTUMES NOT DIVIDING HUMAN FORMS PROPORTIONATELY.
See page 344.

tendency of thought causes us to suppose other imaginary vertical straight lines, drawn, as in the same Fig. 73, at equal distances from this central line; and from them

we may gain an impression of relative regularity by noticing to what extent the lines pass through corresponding sides of the face. Besides this, we are prompted to suppose horizontal lines drawn, as indicated in the same figure, across the forehead, eyes, and mouth; and from these lines, too, we form judgments with reference to the degrees of regularity. If the hair or one eyebrow be farther down on one side of the forehead than on the other, or if the arch of the eyebrows be not symmetrically rounded, or if the sides of the mouth incline downward or upward, or a lip be larger on one side than on the other, we notice the fact. Of course we do this, only so far as we compare the result with that of an imaginary straight line drawn through the feature. Of like measurements, there are, of those that are horizontal, five at the level of the eyes,—two filled by the eyes themselves, two by the spaces, as seen from the front, between the eyes and the ears, and one filled by the width of the nose. Three other like horizontal measurements may be seen at the level of the mouth, one filled by the main outlines of the mouth,—not including all of them,—and the other two

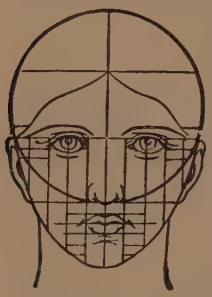


FIG. 73.—FRONT FACE DIVIDED BY LINES.
See pages 345, 346, 348, 349.

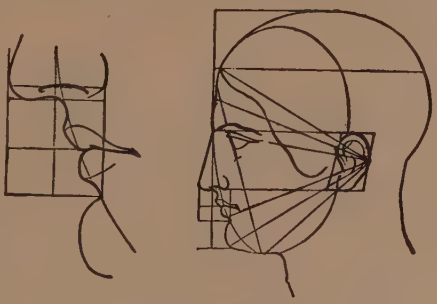


FIG. 74.—SIDE FACE DIVIDED BY LINES.
See pages 348, 349

by the spaces on each side between the mouth and the sides of the cheeks. Another like horizontal measurement may be seen also at the nostrils, and still another at the lowest point of the chin. The same figure shows like vertical measurements between the top of the head and the top of the forehead, also between this and the bridge of the nose, also between this and the nostrils, and, again, between these and the chin.

These measurements conform to the Greek type of

FIG. 75.—FACIAL DIVISIONS.
See pages 348, 349.

FIG. 76.—FACIAL DIVISIONS.
See pages 348, 349.

face, which this figure, and Fig. 74, page 347, are supposed to represent. It must not be inferred, however, that all faces, in order to meet the requirements of proportion, need be similar. Not all the spaces in Fig. 75, page 348, or in Fig. 76, page 348, are divided vertically in the same way as in Fig. 73, page 347, and 74, page 347, nor, as compared with one another, are the spaces in Figs. 75 and 76 divided in the same way. Yet they are all divided so that certain measurements in each are like one another. These like measurements, moreover, are such as, probably,

half the people in the world, without ever having been aware of it, have been in the habit of perceiving. In other words, they have been in the habit, when looking at a face, of comparing, mentally, the distance between the chief line of the eyebrows and of the eye, with the distance between the nostrils and the mouth, and also of comparing, above and below these narrower spaces, the wider distances between the hair and the eyebrows, the eyes and the nostrils, and the mouth and the chin. The narrower distances are usually to the wider as 1 : 2, though, in accordance with the principle of *alternation*, it is not absolutely necessary that the ratio between the two should be expressible in just these numbers. All that is necessary is that the first and third measurements should seem alike, and that the second and fourth, which also seem alike, should seem sufficiently unlike the first and third not to confuse the mind by suggesting likeness where it is not supposed to be suggested.

If our readers will examine Figs. 75 and 76, and then recall their own experiences, when judging of faces, they will probably be ready to admit that, much as has been made of the Greek vertical division of the face as in Figs. 73 and 74, they seldom think of comparing either the height of the forehead, or the length of the nose, with the distance between the nostrils and the chin. Moreover, if they do compare these, and find all of equal measurement, they do not, usually, if people of English-speaking countries, admire the arrangement. It fails to represent the face to which they are the most accustomed, or, to go deeper, it fails to represent the characteristics by which they are most attracted. For these reasons, if they tell us that they consider the faces in Figs. 75 and 76 more satisfactory than those conforming to

the Greek type, they are justified. According to the laws of form, properly interpreted, other faces may fulfil equally with the Greek—though in a different way—the principles of proportion. But, besides this, according to the laws of significance, as derived from association with faces of another type, from deductions with reference to the characteristics manifested by such faces, and from sympathy with such persons as possess these characteristics, it is in complete fulfilment of æsthetic principles to say that the faces are as beautiful as the Greek, and that their beauty, to one of the race and country to which they belong, is enhanced on account of its significance.

The outlines enabling us to recognise that two complex figures inscribed within them are in proportion, need not, invariably, be composed of straight lines, as in rectangles. Sometimes it is impossible that forms should accomplish that for which they are intended without being composed of curved lines like those of an ellipse or of a circle. Either of these may be made a standard of comparison by which to judge of the relative measurements, or—what is the same thing—the proportions of the contours drawn about it or within it; and, of course, in case outlines be curved, a curved standard is much more satisfactory than one that is rectangular. Notice the like segments of circles made to describe the chief curves in the foremost outlines of the human form in Fig. 70, page 345.

There is a reason for the use of these circles as a standard of measurement derived from the physiological requirements of the eye, especially in binocular vision. Dr. M. Foster says in his "Text-Book of Physiology," sec. ii., on Binocular Vision—that "when we use both

eyes a large part of the visual field of each eye overlaps that of the other; but that, nevertheless, at the same time, a certain part of each visual field does not so overlap any part of the other. If the right hand be held up above the right shoulder and brought a little forward, it soon becomes distinctly visible to the right eye; it enters into the field of sight of the right eye. But if the right eye be closed, the right hand kept in its former position is not visible to the left eye; it is outside the field of sight of that eye." . . . "The dimensions of the field of sight for one eye will, even in the same individual, vary with the width of the pupil and other dioptric

FIG. 77.—CIRCLES ILLUSTRATING FIELD OF DISTINCT VISION FOR BOTH EYES TOGETHER.
See page 351.

arrangements of the eye." We may, however, conceive this field of sight—especially as applied to that central section of it where vision is most distinct—to be approximately circular. But, so far as this is true, notice that the whole field of sight—not for one eye, but for both eyes when acting conjointly—is represented neither by the single circle at the left of Fig. 77, page 351, nor by the two separated circles at the right of this figure; but rather by the space enclosed between the two circumferences of the circles where they overlap, as in the second and third drawings of this figure. This space has the shape termed by botanists elliptic lanceolate,—an ellipse pointed; and of all outlines wholly curved, those of an upright ellipse fit into it most nearly.

The bearing of this upon our present subject is found

in the fact that the whole of a form facing us can be recognised with ease, *i. e.*, in a single glance, or, at least, a single conscious glance, in the degree in which it is conformed to vertical elliptic-lanceolate outlines. Indeed, this fact thus theoretically unfolded, can be confirmed by practical experiments. If we describe at the nearest point at which it is possible to perceive all its outlines, an ellipse longer vertically than horizontally, and about it a circle of the same diameter as the vertical length of the ellipse, there will be not a few who will find it slightly more easy at a single glance, or without consciously changing the axis of the eye, to perceive all the outlines of the former than of the latter. If we describe about the circle and ellipse a square of the same diameter as the circle, no one can see all its outlines without consciously changing the axis of the eye, as when glancing from corner to corner; and if we describe about the square a rectangle of the same vertical but twice the horizontal dimensions, we cannot see all its outlines without changing the axis still more consciously.

In the use of the eyes, the difference between movement and no movement, or *no conscious* movement, is the difference between activity, work, or effort, and rest, play, or enjoyment. But this is the same difference as in Chapter III. of this book is said to separate that which is done with a utilitarian aim and an æsthetic. If a form of outline naturally fitting into the shape of an upright elliptical figure, be the one which requires, to recognise it, the least visual activity, work, or effort, then this form must be the one most conformed to the physiological requirements of the eye. In other words, it is the form most in *harmony* with these requirements; therefore the most agreeable, the most pleasurable, the most

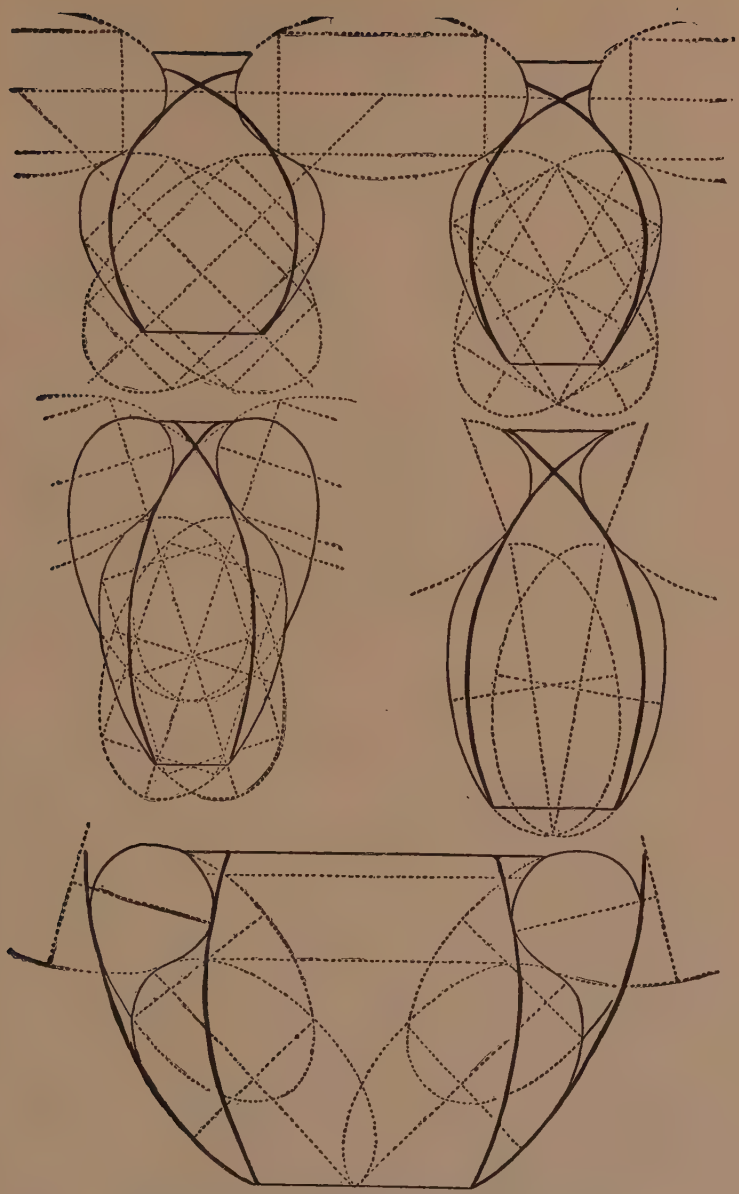


FIG. 78.—VASES OUTLINED BY ELLIPSES AND CIRCLES.

See page 355.

"fitted to be perceived," which is the exact etymological meaning of the word *æsthetic*. This fact furnishes the best possible justification for calling the curve—particularly, as we shall notice presently, the one found in the ellipse,—the line of beauty.

What has been thus found to be true with reference to the elliptical contour, renders significant many whole

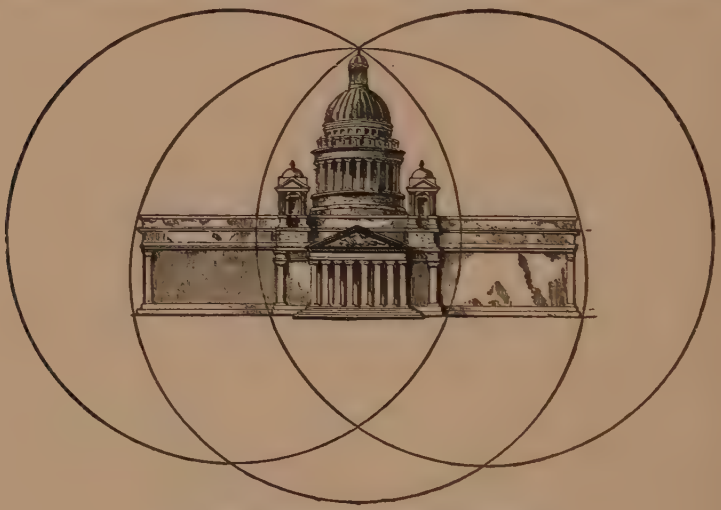


FIG. 79.—BUILDING ENCLOSED BY CIRCLES.
See pages 222, 252, 261, 290, 293, 296, 302, 355.

classes of facts with which few of us can fail to be familiar. Recall, for instance, the extensive use in art of this elliptical shape. If we go into the shops where they sell implements for drawing, whatever else they may not keep, assortments of models for different sizes of ellipses are sure to meet our eyes. The one ornamental object, avowedly not modelled after an appearance in nature, which the arts of all lands and races have united

in producing, is the vase; and this is almost invariably conformed to vertical elliptic-lanceolate outlines. See Fig. 78, page 353. In this the heavy continuous lines are elliptic-lanceolate, such as are formed by the convergence of two circles. The dotted lines describe regular ellipses; and the slight continuous lines represent vases framed in elliptical outlines without reference to converging circles. Again, in architecture, the form that general usage has shown to be the most satisfactory is one which, whether

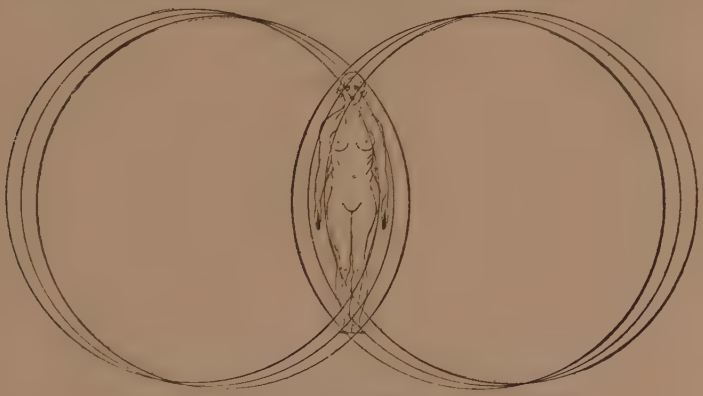


FIG. 80.—WOMAN'S FORM ENCLOSED BETWEEN CIRCLES.
See page 355.

we consider it as exemplified in the cupola or the dome, is like that described within the space enclosed between circles in the centre of Fig. 79, page 354, and even if the building be wide, the form preferred for this is one containing at least a central part which, as in Fig. 79, it is possible to enclose in such a space. Notice, too, in Fig. 80, page 355, how the human form as a whole fits into the same elliptic-lanceolate shape.

These human forms that are inserted in this book were drawn not by the author, but by others to represent what

were supposed to be approximately perfect proportions. Is it not remarkable that like circles outline so many general features of the contour when viewed either in repose, as in Fig. 70, page 345; Fig. 81, page 356; or in action, as in Fig. 82, page 357? One who will go over any representations of the human figure with compasses will

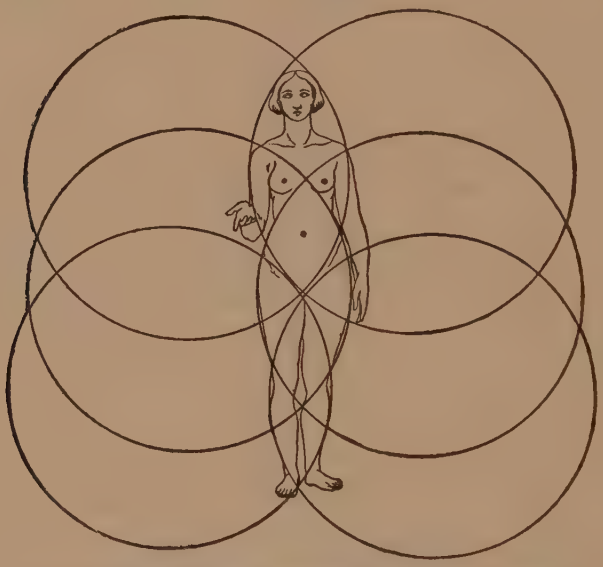


FIG. 81.—WOMAN'S FORM ENCLOSED BETWEEN LIKE CIRCLES.
See page 356.

be surprised to find how large a part of a segment of exactly the same circle fits either the bend of the calf, forearm, thigh, abdomen, chest, or back. If, then, his experience—say at a bathing-place—causes him to recall the æsthetic influences of such formations as a long arm or leg combined with great leanness, or a small chest combined with an abnormally large abdomen, he will

find upon reflection that the effects of disproportion, while attributable partly to association, are also attributable partly to a recognition of an absence of like curves. Or, to illustrate this fact from a contrary condition, everybody admires a small ankle and a good-sized calf. Yet

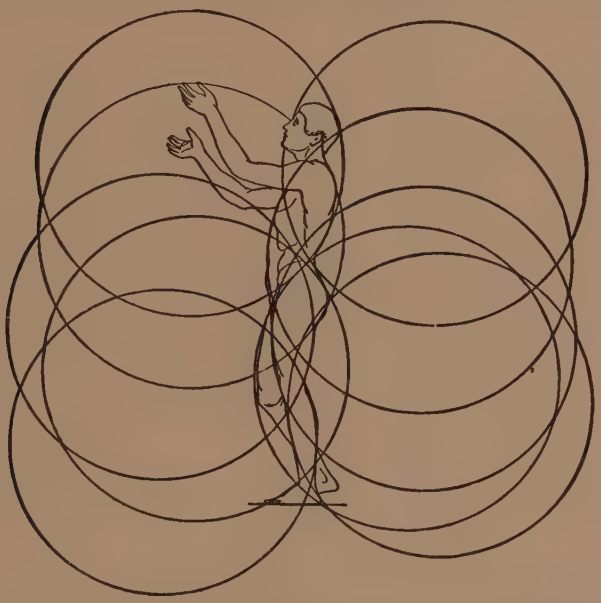


FIG. 82.—CIRCLES DRAWN ABOUT A FORM IN GRACEFUL ACTION. SIDE VIEW.
See page 356.

the moment the calf becomes so large proportionately as to interfere with the suggestions of a like curve in this, and in the outlines of the hip, almost everybody is conscious of receiving a suggestion of disproportion.

What has been said of proportion is sufficient for our present purpose; *i. e.*, to indicate the general principle

involved. Those who may wish to study the subject further, as applied either to the human form or to other products in the arts of sight, may consult pages 32 to 253 of the author's "Proportion and Harmony of Line and Colour in Painting, Sculpture, and Architecture."

CHAPTER XVII.

HARMONY OF TONE IN THE ARTS OF SOUND.

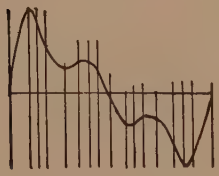
The Effects of Rhythm and of Harmony Illustrate the Same Principle—What Causes Loudness and Pitch of Tone—What Causes Quality—Musical Tones Compounded of Partial Tones Caused by Vibrations Related as 1:2, 2:3, etc.—These Partial Tones are Merely Repeated in Scales—And Chords—Musical Harmony Results from Putting Together Notes Having Like Partial Effects—This True of the Most Complex Arrangements—True of Poetic Harmony.

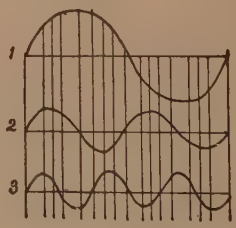
AS stated on page 334, the most important difference between the effects of rhythm and of musical harmony is found in the fact that, in the latter, the mind is not directly *conscious*, as it is in the former, of divisions or subdivisions in time. It is conscious merely of an agreeable thrill or glow. That this thrill is experienced in the degree in which the divisions are alike, or are multiples of those that are alike, is a scientific discovery.

The chief facts with reference to the subject for which we are indebted to science are, first, that degrees of loudness are determined by the relative amplitude of vibrations. A string of a certain texture and length will produce a loud sound in the degree in which it is struck violently, and, therefore, caused to cover a greater space with its vibrations. The second fact is, that degrees of pitch are determined by the relative time of vibrations. A string shortened in length, and therefore vibrating more rapidly, will produce a higher tone. It is from this fact, that, by very simple experiments, the law

was discovered that harmonic tones are related to one another according to certain definite ratios.

After physicists had proved that degrees of loudness in sound are determined by the amplitude of vibrations, and degrees of pitch by the time of vibrations, they felt that nothing was left to determine the quality of sounds except the forms of vibrations. It was natural to suppose, too, that the waves of sound produced by strings, or by wind-instruments,—a trumpet, or a human throat, for instance, deviated as they are from a straight course by a number of curves and angles,—must necessarily be more or less compound, and, being so, must differ in form for different kinds of instruments. Considerations of this sort caused investigations to be made into the forms of vibrations; and by means of very ingenious expedients,—by magnifying, for example, the vibrations of a cord or pipe, and making them visible, through using an intense ray of light to throw an image of them upon a canvas in a darkened room,—the forms assumed by the vibrations caused by many of the ordinary musical instruments have been accurately ascertained. These forms have been resolved, according to well-known mathematical principles, into their constituent elements. For instance, if the form of vibration be as in the first of these examples, it may be resolved into the forms that are in the second.





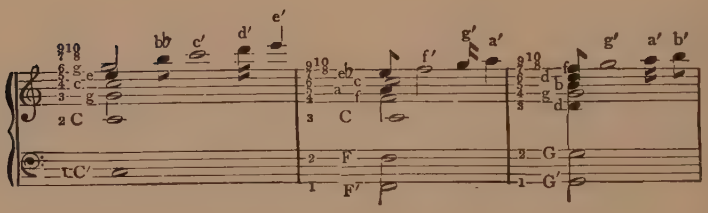
In short, investigations of this character have shown that musical sounds may result, and usually do result, not from simple but from compound forms of vibrations; that is to say, in connection with the main waves there are other waves. All these are not invariably present, but when present they are related to the main wave—*i. e.*, in tones that make music as distinguished from noise—as 2:1, 3:1, 4:1, 5:1, 6:1, 7:1, 8:1, 9:1, or even in some cases as 10:1. In other words, these smaller accompanying waves may vibrate two, three or four times, and so on up to ten times, while the main wave is vibrating once. But this is not all. The sounds of these compound waves have been analysed. By means of instruments like Helmholtz's resonators, which are small brass boxes or globes each made of such a size as to respond sympathetically to a certain pitch, it has been found that each form of wave represented in a note produces a separate pitch of its own. When, therefore, a tone is sounded on a violin, we hear in it not only this tone caused by the vibrations of the whole length of the string, but also in connection with it a number of other partial tones, as all the constituents of any one note are called, each of which tones has its own pitch, produced by vibrations of one-half, one-third, or one-fourth, etc., of the length of the string.

The difference in the number, the combination, and the relative loudness of these partial tones in a musical sound is what determines its quality or timbre. In instruments like kettle-drums, cymbals, or bells, one side is almost invariably thicker than the other. For this reason, the main vibrations are not uniform, and, of course, the partial tones cannot be so. Such instruments, accordingly, are less musical than noisy, and are

used on only exceptional occasions. But in ordinary musical sounds the partial tones, if present at all,—they differ as produced by different instruments,—are indicated in the notation below. Notice that the prime tone is counted as the first partial tone; also that the second, fourth, and eighth partials are the same as the prime tone with the exception of being in higher octaves.

Partial tones of the pitch of C

Of F, of which C is the third and nearest partial

Of G, which itself is the third and nearest partial of C

The notes that are used, 𝅝 𝅗𝅥 ♩ ♪ 𝅘𝅥𝅯, in the degree in which they are long, indicate tones which the reader needs most to notice; and the marks after the letters indicate the relative distance of a tone from the octave of the tone which is the standard of pitch. C′, F′, or G′, for instance, are one octave below C, F, or G, and these are one octave below c, f, or g, and two octaves below c′, f′, or g′.

Glancing at the above, suppose that we were to sound the note C, and then to sound, either after or with it,—for the laws of harmony have to do with the methods of using notes both consecutively and conjointly,—notes

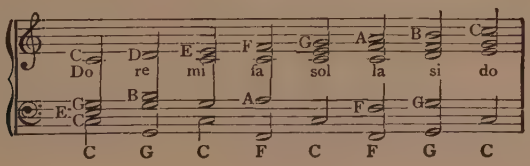
whose partial tones connect them most closely with C,—what notes should we sound? We should sound F,—should we not?—of which C is the third partial, and G, which itself is the third partial of C. This, inasmuch as every C, F, or G of whatever octave has virtually the same sound, would give us the following:

But these are the very tones accredited to the "lyre of Orpheus," which represented the earliest of the Greek scales.

Let us add to these notes those whose partial tones are the next nearly connected with C, F, or G. They are D the third partial of G, E the fifth partial of C, A the fifth of F, and B the fifth of G. This gives us

C—D—E—F—G—A—B—C,

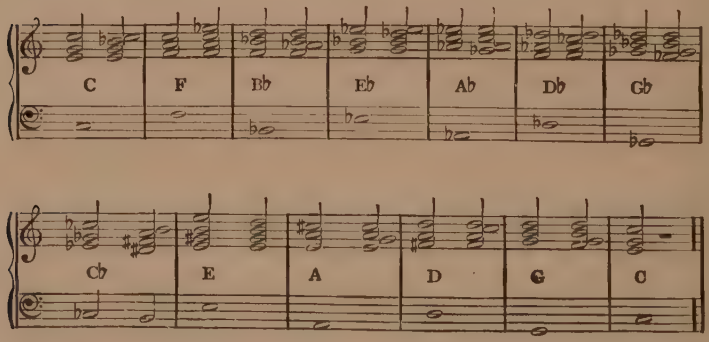
which is our own major scale, the main one that we use to-day; and is similar to one used by the Greeks after theirs had been expanded to seven notes.

Now let us examine the tones that are used conjointly in what are termed chords. As a rule, the notes of the ordinary major scale are harmonised thus:

Let us compare these notes with the scheme of the upper partial tones of C, F, and G. We at once notice that C, F, and G are the three bass notes used in har-

monising this scale; also that the nearest and most universally present partial tones of C, F, and G are those used in the successive chords.

These illustrations are sufficient to show that harmony, whether we apply its principles to consecutive notes, as in melodies, or to combined notes, as in chords, involves bringing together sounds that are composed of like partial tones; or, as we might say, harmony is a complex effect produced by a combination of like partial effects.

Of course harmony, like rhythm and proportion, often involves very intricate arrangements and developments, but through them all can be detected the presence of this one underlying principle. The following, for instance, represents a common way of accomplishing the result which is termed "making the circuit" of all the major keys. Those unacquainted with music will understand sufficiently what is meant when it is said that the chords of one key are often discordant with those of another key unless, in some such way as is indicated in this music, an artificial connection has been made between the two.



Notice how effects of unity are secured throughout by

means of interchange and transition. See pages 311 and 314. Every chord, including, of course, its bass note, contains, at least, one note that is sounded in the chord following; and thus, as applied to any two consecutive chords, the principle of putting like with like is fulfilled.

Harmony in music, therefore, may be said to be an effect of unity produced when complex wholes are grouped by putting together those that have like partial effects. The main result of this, as intimated on page 310, is consonance. When consonance is not complete, its general effect is secured through using such methods as those of interchange, gradation, and transition, which, nevertheless, cause all the divergent parts of a composition to *assimilate*. (See Appendix, page 387.) Because, too, all the methods in the chart on page 277 are, more or less, connected, music, at times, reveals traces of the influence of every one of these.

Some may suppose that, in poetry, there are no effects corresponding to those of musical harmony. But this is not so. Inasmuch as poetry uses words, the articulation of these renders them more clearly distinguishable from one another than are musical notes; and there is not the same necessity, as in the latter, for merely tonal distinctions of quality and pitch. But science has ascertained that in addition to the pitch on which a vowel or consonant is apparently sounded, it has, at least, one partial tone peculiar to itself, which tone is always at the same pitch. For this reason, alliteration, assonance, and rhyme all involve the use of like pitch; consecutive syllables produce different consecutive degrees of pitch, *i. e.*, melodies, or what are termed tunes of verse; and every syllable containing a vowel and a consonant, like *an*, for instance, contains two tones that may or may not har-

monise. For these reasons, the words of poetry, though in a very subtle, but, at the same time, suggestive way, fulfil the same methods as those of musical harmony. See the author's "Rhythm and Harmony in Poetry and Music," Chapters V. to XII.

CHAPTER XVIII.

HARMONY OF COLOUR IN THE ARTS OF SIGHT.

Production of the Colours of the Spectrum—Effect of Light upon Colours—Definition of Terms—Complementary Colours—As Produced by Light and by Pigments—The After-Image in Consecutive Contrast—Simultaneous Contrast—All Colours Impart about them Tints of their Complementaries—Principles Determining Use together of Two Colours—Of Three Colours—Of Four Colours—Consecutive and Simultaneous Contrast Due to Physiological Action of the Eye—Correspondences between Ratios of Harmonic Colours and Tones—Owing to Minuteness of Colour-Waves Nothing in Colours Corresponds to the Different Scales in Music—The Ratios of the Two Notes of a Single Musical Scale Forming the Most Perfect Consonance—This Ratio as Represented among the Colours—Colour Harmony as Actually Developed—Not from Ratios Occasioning Vibrations, but from Analysis of Light—The Field-Theory of Colour-Harmony—Theory Based on Psychological Effects—On Physiological Effects—Tone, or the Predominant Use of One Colour in a Painting—Why this May Fulfil the Same Principle of Harmony as the Use of Great Variety of Colour—Colour Harmony Results from an Application to Colour of All the Principles Unfolded in Chapters XIV. and XV.—Beauty in Art—And Suggestion—Conclusion.

IT is now more than two centuries since Newton, analysing the rays of the sun, detected that all the different colours, except, perhaps, extreme purple are contained in light. Most of us know how to reproduce his analysis. By means of a mirror, the sun's rays are reflected in a small band through a narrow opening in a window-shade or blind, and sent into an otherwise darkened room. When they enter this room, they are made to pass through a glass prism. The prism turns the band of rays aside from its direction, and, at the same time, separates

it into many bands of rays which are coloured, and each of of which, after leaving the prism, continues in a straight line. If these bands fall on a white wall or screen, each produces a different colour, and all together a series of colours in which we recognise all that are in the rainbow. Nearest where the white would have fallen, if the prism had not intervened, we find red, and next to this the other colours in this order: orange, yellow, green, blue, indigo, and violet. This series of colours is called the Spectrum.

If, aside from the Spectrum, we test the effects of different degrees of light upon colours, we find that in a darkened room, blue appears to be dark blue, but as we gradually increase the light it becomes first blue, then light blue, then pale blue, then, in light of great intensity, loses its blueness almost entirely, becoming very nearly white. So, too, if in place of different degrees of light, we use black or white pigments, mixing them with coloured pigments, we find the colours becoming respectively darker or lighter.

The different kinds of colours are termed *hues*. When hues are in the state in which they appear in the spectrum, they are called *full* or *high* colours. If darker than in the spectrum, the colours are termed *dark*, if lighter, *light;* if very much lighter, *pale*, or, what means the same thing, *broken*. When full colours are made darker, their different degrees of darkness are termed *shades*. When they are made lighter their different degrees of lightness are termed *tints*. The degree of colouring or of dark or light in a shade or tint determines the *tone*, as when we speak of a golden and gay, or a gray and sombre tone. Paintings, however, are not generally said to be distinguished by tone except when producing the effect

described on page 381. In a *positive* colour the tint or shade of a single hue is prominent; in a *neutral* colour, there is so much of a mixture that there is no predominating hue. The *warm* are the reds, browns, oranges, yellows, and associated colours; the *cold* are the greens, blues, violets, purples, and associated colours. *Primary* is a term formerly applied to red, yellow, and blue, becaused they were supposed to be primitives from which, when mixing pigments, the *secondary* colours, orange, green, and violet were derived, orange by mixing red and yellow, green by mixing yellow and blue, and violet by mixing blue and red. For reasons to be given by and by, however, these distinctions between primary and secondary are not now considered tenable.

Let us return to the spectrum. If all the colours together make white, it follows that the absence from white light of any of its constituent elements must produce a colour. This logical inference has been confirmed by the following among other experiments. Between the prism and the spectrum cast by it, according to the explanations given on page 367, a lens bounded by cylindrical surfaces is introduced. This lens is so constructed that it reunites the prismatic bundle of rays into a single band, *i. e.*, it restores these rays to the same condition in which they were before they reached the prism from the slit in the window. This cylindrical lens now gathers the rays together, and casts upon the wall, where the spectrum was before, merely a small white image of the slit in the window, giving thus a proof, in addition to the others just noticed, that all the colours together make white. If now between the cylindrical lens and the wall a part of the light be shut off by means of a screen, a coloured image instantly appears upon the wall. If, for

shutting off this part of the light, one use, cemented to a plate of glass, a prism finer than a knife-blade, and showing, therefore, no sensible dispersion of colours, although its power of refraction remains, it will divide the rays into two bands which will form two images on the wall, each of which will be coloured. In such cases the colours depend upon where the rays are divided. Beginning with the rays that produce the red end of the spectrum, and moving the dividing prism gradually toward the rays that produce its violet end, it is found that

if one colour be red		the other is	bluish green;
" " " "	orange	" " "	turquoise-blue;
" " " "	yellow	" " "	ultramarine-blue;
" " " "	yellowish green	" " "	violet;
" " " "	green	" " "	purple.

These, then, are the two colours which together make white, termed for this reason the *complementary* colours.

They are not, as some will notice, the colours which in former times were supposed to make white. Those were derived from experiments with pigments in the following way: It was found that red, yellow, and blue paint, when mixed together, made white, or rather a whitish grey. It was supposed, therefore, that if two colours were to be used, they also, in order to represent white, should be compounded of these three primitive colours, as they were called. Artists therefore took as their complementary colours

red and green,	which latter they had found could be formed by mixing	yellow and	blue;
yellow and purple,	" " " " " " " " " "		blue and red;
blue and orange	" " " " " " " " " "		red and yellow.

Some years ago the German physicist, Helmholtz, revealed very clearly the erroneousness of this supposition, showing that, largely because of the character of the

ingredients entering into pigments, the results are different when pigments are mixed and when colours themselves are mixed.

Now let us consider another fact with reference to complementary colours. If, after looking steadily for a few seconds at a white wafer on a black ground, we turn our eyes to a white or gray ground, with nothing on it, we frequently seem to see a black after-image, as it is called, of the same shape as the wafer. If we look in the same way at a bluish green wafer, and then turn our eyes to the gray ground, we find on it an after-image, if not of bluish green, of red, *i. e.*, of the colour which complements the bluish green. So, if we try other colours, we find if not these colours themselves, their complementary colours in the after-images. If, when we turn our eyes away from the wafer, the surface at which we look be of the same colour as the wafer, the complementary colour in the after-image is pale and faint; if the surface be of the colour complementary to that of the wafer, the complementary after-image is more brilliant than its own colour which forms the background. If the surface be of any other colour, the complementary colour of the after-image blends with it and produces a new mixed colour. In this way the after-image of the bluish green wafer would be red on a white surface, faint red on a bluish green, brilliant red on a red, violet (*i. e.*, red mixed with blue) on a blue, orange (*i. e.*, red mixed with yellow) on a yellow, and so on. This effect is termed consecutive contrast.

There is another effect related to this termed simultaneous contrast. Charles Blanc, in his "Grammar of Painting and Engraving," tells us that Eugene Delacroix, occupied one day in painting yellow drapery, tried in vain to give it the desired brilliancy, and said to himself,

"How did Rubens and Veronese find such brilliant and beautiful yellows?" He resolved to go to the Louvre, and ordered a carriage. It was in 1830. At that time in Paris there were many cabs painted canary-colour. One of these was brought to him. About to step into it, he stopped short, observing to his surprise, that the yellow of the carriage produced violet in the shadows. He dismissed the coachman, entered his studio full of emotion, and applied at once the law that he had just discovered, which is, that the shadow cast by an object of a certain hue is always slightly tinged with the *complement* of that hue,—a phenomenon that becomes apparent when the light of the sun is not too strong, and our eyes, according to Goethe, who, as Eckermann tells us in his "Conversations," made a similar discovery, "rest upon a fitting background to bring out the complementary."

An explanation for the reasons for consecutive and simultaneous contrast is attempted in Chapter XXII. of the author's "Proportion and Harmony of Line and Colour in Painting, Sculpture, and Architecture." Here it is sufficient to point out two deductions from the phenomena. The first is that all colours have, at times, the effect of imparting the tints of their complementaries to any surface adjoining their own. In such cases, if the surface have no colour, they produce one there; if it have their complementary colour, they make this more brilliant; if it have some other colour yet not their own, they cause this and their complementary to blend and produce a mixed colour different from either. It is needless to say that these facts render it exceedingly difficult for the painter to secure satisfactory results in colours, whether he be attempting either to imitate those that he sees or to blend any colours whatever harmoniously.

With reference to the latter problem, it seems to be a natural conclusion from what has been said that he can always put, side by side, the complementary colours; as red and bluish green, orange and turquoise-blue, yellow and ultramarine, yellowish green and violet, and green and purple. But, as the principle underlying the phenomena of the complementary colours is that the two make white, it seems to be equally clear that the artist can place side by side any two colours which, when mixed with one another's complementaries, can complement; as red and turquoise-blue, for instance, because, according to the principle explained on page 372, the red imparts a bluish green tint to the turquoise-blue, and the turquoise-blue an orange tint to the red. Undoubtedly, some of the most effective combinations or pairs of colours, not complementary, may be accounted for according to this rule. The two are harmonious because, especially when one of the colours is very bright, like vermilion, orange, or yellow, it is possible for the two, when in combination, to fulfil the principle causing us to use complementaries even better than would complementaries themselves. It is this fact, probably, that accounts for the satisfaction taken in the combinations of the colours brought together according to a colour scale of Von Bezold printed in his "Theory of Colour." This scale need not be described here. It is sufficient to say that the pairs of colours to which it leads are much the same as those to which the consideration just mentioned applies, and some of them are composed of the colours formerly supposed to be complementary. Von Bezold's pairs are these:

purple and green.
carmine and bluish green.
vermilion and turquoise-blue.
orange and ultramarine.
yellow and bluish violet.
yellowish green and purplish violet.

Experience has shown, he says, that these form even better combinations than do the complementary colours.

It follows, almost as a corollary from what has been said, that when more than two colours are used any number of these can go together which, together, or mixed with their complementary effects, can make white. This rule applies to the old-fashioned primaries, red, yellow, and blue, and to the secondaries, orange, green, and purple. Von Bezold develops and particularises the rule as follows:

carmine, yellowish green, and ultramarine.
vermilion, green, and bluish violet.
orange, bluish green, and purplish violet.
yellow, turquoise-blue and purple.

In using four colours, Von Bezold—and in this others agree with him—advises marking the effect strongly by taking two pairs, as, for example, purple and green together with carmine and turquoise-blue, one in each of which pairs is, in the spectrum, near one in the other, and then arranging all the colours so that those which, in the spectrum, are near together, shall not meet. See page 368.

The second deduction legitimately drawn from the phenomena of consecutive and simultaneous contrast, as explained on pages 371 to 373, is that the facts are due, in part, at least, to the physiological action of the eye; *i. e.*, to the way in which it receives the influences of light from without. These influences, scientists tell us, are caused by waves which, in some way, communicate vibrations to the retina. Here is a table of waves and vibrations prepared by Sir Thomas Young:

	Breadth of Wave.	Vibrations per Second.
Extreme red	0000.266	458,000,000,000,000
Red	0000.256	477,000,000,000,000
Orange	0000.240	506,000,000,000,000
Yellow	0000.227	535,000,000,000,000
Green	0000.211	577,000,000,000,000
Blue	0000.196	622,000,000,000,000
Indigo	0000.185	658,000,000,000,000
Violet	0000.174	699,000,000,000,000
Extreme violet	0000.167	727,000,000,000,000

With reference to this subject, however, authorities differ. In one of the latest books on this subject, "Studies in Spectrum Analysis," by J. N. Lockyer, the number of vibrations causing extreme red light is given as 392,000,000,000,000; and causing extreme purple as 757,000,000,000,000.

If there be any correspondence between the conditions causing harmony in colour and in tone, we ought to find the ratios between series of vibrations representing the harmonic colours the same as the ratios between series of vibrations representing the harmonic tones. As a rule, however, physicists have had little respect for those who have advocated this theory, because these advocates have usually started out with the hypothesis that there is some absolute and necessary connection between the seven colours of the spectrum and the seven notes of the musical scale. But, as a fact, there may be more than seven colours in the spectrum. This all depends upon where, as illustrated on page 370, one divides the rays. Moreover, in music, seven notes are used merely as a matter of convenience. There have been scales extensively used of four and six notes, and possibly our own might be improved by the addition of two more. There is a principle, however, as was shown on pages 362 to 364, under-

lying the formation of all musical scales, as well as of all melody and harmony, which depends upon the relative numbers of vibrations. One cannot refrain from feeling, therefore, that it is logical to suppose that this same principle should be exemplified in that which causes colours to harmonise.

It does not allay this feeling, to remind one that between, say, the 400 trillions of vibrations causing extreme red and the 750 causing extreme violet, the differences in the numbers of vibrations do not correspond to those in a single octave in music. They do correspond to those in the musical scale, so far as this can be produced without doubling one of its notes. The differences correspond to all the intervals in the music on page 363, between C and B inclusive. If an upper *c* were represented, then (notice the music on page 362) an upper *d*, *e*, etc., should be represented. Otherwise one of the colours—that corresponding to C—would have double the value of each of the others. As it is, we have in the colours all the range of intervals corresponding to those of a single octave without encroaching upon a second. The possibility, however, of producing differences in colour is much greater than that of doing the same in sound. Indeed, when we consider the innumerable shades and tints not merely of one colour but of all other colours in connection with which this one may produce mixed effects, we are forced to recognize that the range of a single colour-octave, such as can be used in painting, is practically much greater than the range of seven or eight tone-octaves, such as can be used in music.

Now turning to the musical scale, let us notice what are the two notes between C and B—*i. e.*, between the lower *do* and the *si* of the scale as we ordinarily sing it,

—which form the most perfect harmonics. Glancing at the representation of the partial tones in the first column of the music on page 362, we shall find that these two notes are *g* and *c*. In the lower scale, between C′ and C, there is no partial tone. In the scale above this, between C and *c* there is one partial, and, therefore, after *c*, this one is the most important harmonic partial of the series. It is *g*. This *g* is the third partial above C′; and *c*, in the same scale, is the third *c* above C.′ The numerical representative of *g* as a partial is 3; and the numerical representative of *c* is 4. .3 : 4, therefore, may be said to be the ratio representing the relationship between the vibrations causing tones which, in the same octave, are the most nearly harmonious.

Let us observe what should be the vibrations causing the complementary colours in order to have them represent this ratio. Here we have it:

	Number of Trillions of Vibrations.	Ratios.
Carmine-red	472	3 : 4
Bluish green	630	
Vermilion	480	"
Turquoise-blue	640	
Orange or Vermilion	491	"
Turquoise-blue	655	
Orange (?)	500	"
Ultramarine (?)	666	
Yellow (?)	540	"
Bluish violet (?)	720	
Yellowish green	560	"
Violet	746	
Green	580	"
Purple	773	

These numbers of trillions of vibrations, with exception of those in the pairs marked with an (?), in which yellow

or orange appears, are almost exactly the numbers assigned to the colours on page 375; and, in all cases, the two colours placed together are the same that, on page 373, are said to be complementary. As for yellow and orange, they contain so much light, and are so nearly alike, that the boundaries between them are difficult to determine, and we may be justified in doubting the accuracy of the computations made with reference to them. In a general way, it seems to be indicated that harmonic colours are the results of vibratory effects upon the eye of multiples of like measurements, thus fulfilling exactly the analogy according to which harmonious effects are produced upon the ear. It could be shown, also, that where three or four colours are harmonious, there is the same relation between the vibrations causing them as between those of three or four chording musical notes.

It must not be supposed, however, that these results have been recognised by those who have developed in painting what is termed colour-harmony. Like tone-harmony, this was developed, at first, by artists of exceptional taste, knowing little and caring less about the scientific reasons underlying their choice of combinations. But, after art has developed to a certain extent, scientists always make a study of its effects. That which they discover increases not only the knowledge and the appreciation of art on the part of the general public, but also adds not a little to the resources of the artist and to his ability to make further progress.

Nor must it be supposed that colour-harmony, so far as it has been developed from the contributions of science, has been based upon the relations between vibrations in the eye in the same way in which tone-harmony has been based upon the relations between vibra-

tions in the ear. The numbers of the latter vibrations can be and have been definitely determined. The numbers of vibrations causing the colours have not been determined except approximately. For this reason, and very wisely, the principles of colour-harmony have been developed from facts which, though related to those of vibration, have, unlike them, been definitely ascertained. The different stages of development have been somewhat as follows:

The discoveries with reference to the complementary colours, as described on page 370, led to the natural supposition that the eye takes pleasure in seeing these two together; and as, in all cases, the two were found to make white, it led to the supposition that any two or more colors making white would cause harmony. Not long after, too, it led to the supposition that these colours must be introduced into a painting in just such *proportions* as to make white. This was the conclusion reached by the English physicist Field, in what is termed the Field-theory. For instance, because he found that when, mixed in proportions of 8, 5, and 3, blue, red, and yellow make white, he argued that the quantities of these colours used in the same composition should represent these proportions. A law of this kind, however, though it might be applied to decoration, would evidently interfere with one of the first requisites of the art of painting, namely, that it should represent nature. In how many landscapes can we find the blue of the sky, or the green of the foliage, or the bluish gray of a lowery day, exactly mingled in such quantities with the warmer and lighter yellows, reds, or browns?

On the face of it, therefore, this theory did not seem tenable. Modern artists universally reject it. They tell

us that the slightest spot of crimson against the green of a forest, or of yellow against the blue of the sky, is all that is needed in order to bring out the brilliancy of the complementary coloring; and they point, as an illustration of this, to effects like those in Jules Breton's picture entitled "Brittany Washerwomen," at one time in the Metropolitan Museum of New York, where a very little red in the bodice of the central woman is enough to put fire and brightness into the pervading greenish blue tints of the whole. What is thus said of such arrangements of colour is true. But when it is added that these effects are owing to merely a suggestion given to the mind, one must demur. Those who say it have forgotten a very important principle in æsthetics. That is, that psychological effects (see Chapter II.) must harmonise with physiological, and, as the latter come first in the order of time, it is not logical either to overlook them or to fail to consider them first.

The influence in a painting of very slight quantities of complementary colouring seems to suggest the importance of the method of interpretation indicated on pages 375 to 378. If we may suppose that a colour associated with its complementary produces in the eye an agreeable effect because, for the vibrations causing both colours, there is a common multiple, then we may also suppose that these colours influence, at the same time, the organs of the same retina without producing any sensation of jolting or jarring. All the vibrations are variations of the same *unity* in that they are partial effects of the same single impulse or set of impulses, resulting in a free, unrestrained vibratory thrill or glow. The quantity of colour, therefore, makes no difference with the harmony of the effect. All that is necessary is that the form of vibration causing the

one colour, be it much or little, should exactly coalesce with the form of vibration causing the other colour. It could coalesce in this way, of course, in several different circumstances. First of all, it could do so when there was one predominating colour.

To those acquainted with the terminology of painting, the mention of this effect recalls that which is ordinarily treated under the designation of *tone*. *Tone* is a term often used as if it means merely a predominating or sometimes exclusive employment of one colour varied only by the tints and shades resulting from the effects of different degrees of light Thus, in a scene representing moonlight or twilight, or even a storm, especially if at sea, there would necessarily be one pervading colour, in some cases banishing almost the suggestion of other colours; and such a picture would be said to be particularly characterised by *tone*. For instance, in the painting by Carl Marr in the New York Museum entitled "Gossip," almost every prominent object—the window-curtain, the table-cloth, the apron of one of the principal figures, the bodice of another, the floor, etc.—is depicted in white. On the other hand, in Fortuny's "Spanish Lady," hanging near it, almost every article of clothing is depicted in black; while in Granet's "Monks in an Oratory," a little farther on, the colour of the monks' robes, as well as of the walls and woodwork, is all brown. Such paintings are said to be characterised by *tone*, and, as this quality is usually understood, it is difficult to perceive why it does not fulfil a different law of harmony from that which is fulfilled through a use of great variety in colouring. Indeed, it is often represented that it does; as if the theory that harmony of colouring is produced by uniformity of colouring were antagon-

istic to the theory that it is produced by variety.

But why cannot an identical law be perceived to be operative in both cases? Differences in tints and shades of the same hue, while they involve differences in the intensity of the sight-waves, do not necessarily involve differences in their rates or shapes. Therefore uniformity of colouring is fitted to cause all the vibrations of the same retina to coalesce, *i. e.*, to cause all to be exact subdivisions of some common multiple. But the same effect is produced by the use of one predominating colour with its various tints and shades, enlivened, as in the case of Jules Breton's "Brittany Washerwomen," mentioned on page 380, by an occasional introduction of some tint or shade of its complementary colour; and it is produced also when both complementary colours are used in almost equal proportions. In fact, colour-harmony may result from the use of any colours whatsoever, if only they can be made in some way to produce in the organs of colour-apprehension an effect of unity. This effect follows whenever all the vibrations of the retina that are near together are multiples of some common unit, as is the case when adjoining tints and shades in a painting are of the same hue, or of hues that form complementaries, or for some reason allied to this, as indicated on pages 370 to 374, are fitted to go together. If, in connection with these hues, others must be used requiring what may be termed conflicting forms of vibration, these others must, in the painting, be remote from the first, and be connected with them in accordance with methods of securing partial consonance like those of interchange, gradation, and transition, described respectively on pages 311, 313, and 314. Why this should be the case, may be surmised by recalling that a single vibration is to the whole retina

about what a single wave is to an ocean. On an ocean, divergent forms of waves would not be recognised to be conflicting were they widely separated, or were they changed from one form into another with great graduality; and were thus made—to apply the term of physiological psychology—to *assimilate*. (See Appendix, page 387.)

The reader will recognise now that the use of gradation and like methods in painting involves, just as it does in music, more or less use of all the methods mentioned in the chart on page 277. Colour-harmony, to be successful, must be a result of an application of the same endeavour after unity of effect which, starting with the principle of putting like with like wherever possible, leads to a careful study and embodiment of all such requirements as those of variety, complement, principality, subordination, balance, parallelism, repetition, alternation, symmetry, massing, interchange, continuity, consonance, gradation, transition, and progress. This fact is developed in the author's "Proportion and Harmony of Line and Colour in Painting, Sculpture, and Architecture."

The purpose of the present volume has been to make clear in what sense æsthetic art, when possessed of the finest and highest qualities, from its first conception in the mind to its last constructive touch in the product, is a result of a man's imagination giving audible or visible embodiment to his thoughts or emotions by representing them in a form traceable to material or human nature, which form attracts him on account of its beauty, and is selected and elaborated by him into an artistic product in accordance with the imaginative exercise of comparison or of association, modified, when necessary, so as to meet the requirements of factors which can be compared or associated in only a partial degree. Those

acquainted with recent developments in art will recognise that this conception of it is essentially different from the one most generally accepted in our own times. We are constantly hearing it asserted that, if anything portrayed in art be "true to nature," this fact is a sufficient warrant for its reproduction—in plays or pictures, for instance—as well as a trustworthy test of its excellence. In connection with this assertion, those who—mainly, as is supposed, for moral reasons—object to some of the practical results of applying the theory involved in it are usually represented to be victims of ignorance or bias which they would not manifest had they been sufficiently cultivated æsthetically. According to the conclusions reached in this volume, nothing could be more at variance with the truth than such assertions and representations. Our whole argument tends to show that the mere fact that effects are "true to nature" by no means justifies their use in art of high quality. They can be used in this so far only as, in the first place, they are in themselves beautiful, and, in the second place, are, aside from themselves, suggestive, or capable of being made suggestive, of the artist's thought and feeling. Ugliness and vileness are never beautiful in themselves, though, at times, some feature manifesting them may enhance, by way of contrast, the beauty of some other feature which they are introduced in order to offset. When they form the sole theme of paintings, statues, novels, or dramas, as, unfortunately, is the case in many products of many men greatly praised in our own time—their names need not be mentioned,—the result is opposed to the first principles of æsthetics still more than of ethics.

Again, according to the theory presented in this book, effects, though beautiful in nature, are wrongly used in

the highest art, if they be used on the supposition that, even in their most insignificant features, they are not vehicles of expression. A painting ranks higher than do photographs, because through it one can read the thoughts, enjoy the emotions, and share the moods of the artist revealed behind not only its general conception but every minutest part—every line or hue—through which the conception is presented. It is only logical to argue that an artist, great because instinctively able to secure wide sympathy, will usually avoid what many of less delicate æsthetic sensibility —not to say sense—fancy that some cannot enjoy merely because they have no "feeling for art." A friend of mine once met, on a Pacific steamship, a Japanese fresh from his own country who represented himself as greatly shocked by some framed photographs of European works of art of excessive disrobement which he had observed hanging in the Captain's cabin. "Why?"—said my friend to him. "It is only what one can see almost every day in the life of your own land." "We have it in life," replied the Japanese, "but we don't thrust it upon attention, and, by elaborating it in our art, make a public confession of how much we have been thinking and feeling about it." It is well to observe that this representative of the most artistic of living races was not influenced by ethics but by æsthetics,—by the requirements merely of delicate instinct and good taste.

When these requirements are carried out, the work of art cannot, as a rule, be other than an embodiment of beauty. Because it is this, and because the artist recognises also that he is revealing himself in it, and desires to make his revelations worthy ones, it will also, as a rule, be beneficent in expression, exerting an influence tending to

enlighten, to inspire, and, as Aristotle puts it when describing the aim of the drama, to "purify" mind and heart. It is gratifying to the author to be able thus in closing to point out that the conception of art and of its mission presented in this volume is one—and, probably, the only one—which can logically be made to harmonise with all those conceptions of right thinking and right living which, when applied to practice, have proved to be the most effective in promoting human welfare.

APPENDIX

Beauty According to Physiological Psychology.

THE following criticism on a paper read before the Princeton Philosophic Club was made by my colleague, Prof. J. Mark Baldwin, and afterwards, at my request, put into writing. Coming, as it does, from one who has made a special study of physiological psychology, and who has no interest in maintaining the particular theory of beauty advocated in this volume, the reader will recognize that it is a better confirmation of the essential agreement between this theory and the results of modern investigations than it would be possible for me to present in my own language.

"Psychology seems to be tending to a view of art which emphasizes the subjective or emotional side of what we call æsthetic. Considering pleasure the most general element in æsthetic experience, we may bring the topic under the head of Hedonics, and ask what are the marks of objects, situations, ideas, which make them suitable for arousing in us the particular kind of hedonic experience called æsthetic, *i. e.*, what constitutes beauty?

"Experiments on sensation-states—especially on the apprehension of visual forms—result in showing that wherever there is union of elements readily and easily brought about, wherever integration is affected without strain to the organ stimulated, at the same time that the elements preserve their individuality in a measure, we experience pleasure. In perception, a similar principle is found, known as *assimilation*—to which current psychological analysis is reducing the old laws of association. When a new experience is assimilated readily to old categories—fits into the ready moulds of experience, thought, or conception, then we invariably experience pleasure—not the pleasure of pure identity, but of progressive identity—of a *process* in consciousness. In the higher spheres we find the same fundamental movement. Conception is a process by which detached elements are arranged, brought to unity, sorted out, assimilated; an argument is such a scheme of notions, which go together without strain or conflict; and a beautiful character is one whose acts of will are consistent with one another and get assimilated readily in an ideal of duty.

"Now I think the essential thing in it all—in sensational ease, in assimilation, in logical consistency—is this: does the attention with both its

intellectual and its nervous processes move easily?—that is, is the psycho-physical process impeded or advanced? If the latter, then pleasure; and æsthetic pleasure—just in proportion as the processes to which the attention ministers all tend together to give the best sense or emotion of accommodation.

"The older criteria of beauty can be accounted for on this view: unity in variety, adaptation, association, meaning or expressiveness. And it tends to put an end to the lasting controversy between 'form' and 'meaning.' For Wundt's facts showing that visual beauty of form is due to ease of eye-movements, and Zeising's 'golden section,' and Bain's 'associations of utility,' and the 'teleological judgments' of the intellectualists, and the 'moral worths' of the ethical idealists, as well as the 'real beauty in objects' of the realists—all these get their due, as far as their psychology is concerned, in some such formula as this: the sense of beauty is an emotional state arising from progressive psycho-physical accommodation to mental objects. Of course the metaphysics of beauty and art is not touched by this; and it does not prejudice full metaphysical treatment."—(Wundt, "Physiologische Psychologie," 4th ed.; Ward, art. "Psychology," in "Encyc. Brittan.," 9th ed.; Lotze, "Outlines of Æsthetics"; Marshall, arts. on "The Field of Æsthetics Psychologically Considered" in "Mind," 1892; Baldwin, "Handbook of Psychology," vol. ii., chaps. on "Pleasure and Pain" and "Emotions of Relation," also arts. on "Psychology" and "Sentiment," in preparation for "Johnson's Universal Cyclopædia," new edition, 1893.)

With reference to this subject, it will be noticed that, while there is a general accord, and no conflict whatever, between the opinions thus briefly epitomized and the view of beauty presented in this volume, nevertheless the two are not identical; although there is a sense in which the latter may be supposed to be merely supplementary of the former, and not outside the range of that for which provision is made as by Professor Baldwin in the last sentences of each of his last two paragraphs. The differences of view, so far as they exist, can be brought out best, perhaps, by means of an illustration.

If we drop a perfectly round stone into a perfectly quiet pool, all the commotion that is caused, from the large waves immediately encircling the point of contact off to the minutest waves upon the most distant circumference, will be moved as by one effect or kind of effect; in other words, they will sustain a certain proportion to one another and, relatively considered, each to its nearest neighbor, the same proportion; or if we strike a perfectly constructed bell, the same will be true of the sound-waves encircling it. This condition represents a kind of assimilation that can be rightly compared to that which takes place in connection with effects conveying the

impression of beauty. But if the stone or the bell be very irregularly shaped, the ensuing waves, in either case, will appear to be moved by more than one effect or kind of effect; and, as a result, their influence upon the eye or ear will be inharmonious. The same result will follow still more decidedly if, near the first stone, a second, causing opposing effects upon the eye, be dropped into the pool; or if, at the same time with the first bell, a second causing opposing effects upon the ear be struck. This condition, in a way to be indicated presently, represents the possibility of a kind of assimilation which can take place without likeness to that which distinguishes beauty.

In nature, opposing effects, like differently produced waves on a pool, can often be seen to assimilate; and we have a certain interest in watching the result. So with the sense of accommodation, the one to the other, and, by consequence, of progressive identity of the different stages of logical processes. But notice that in these it is necessary only that two or more very nearly connected conceptions should assimilate, whereas in beauty—as will be recognized upon recalling the conditions underlying rhythm, versification, musical harmony, proportion, collected outlines of columns, arches, windows, roofs, even the tones of a single scale or the colors of a single painting,—it is necessary that whole series and accumulations of effects should assimilate; that, so far as possible, everything presented should seem to be the result of putting like effects (not necessarily like forms—see page 30) with like. This requirement of beauty appears to be met by saying that, in it, the amount of assimilation is increased,—that it results in the degree in which the processes to which attention ministers all tend together to give this sense of accommodation. But even this statement seems insufficient. In the degree in which pleasure of any kind whatever predominates, the consciousness of opposing effects must be subordinated to that of assimilation. Distinctively æsthetic pleasures differ from those afforded by logical connection, or by mere sensational ease or assimilation not only in the relative amount of likeness in them, but also in the relative comprehensiveness of this. There may be physical pleasure in which there is little or no complexity, and therefore no assimilation between effects from sources essentially different, such, for instance, as effects that appeal to the senses and those that appeal to the mind; and the same is true of mental pleasure; and in both forms of pleasure, because of greater narrowness of excitation, there may be more intensity—more, that is, which induces to thrill and rapture, tears and laughter—than in æsthetic pleasure. A person is more apt to become hilarious when being tickled or when hearing good news from the stock market, than when reading Shakespeare. But the peculiarity of æsthetic pleasures is that while they lose in intensity they gain, as a rule,

in breadth. The latter effect follows not only from the relative amount of likeness in them; but still more from the range and different qualities of the sources of this. In their most complete phases, as has been shown, æsthetic pleasures blend the results of that which is most important in both physical and mental stimulus, widening one's outlook and sympathies especially in the direction—for this is distinctive in them—of enabling imagination to perceive subtle correspondences between things material and spiritual which otherwise might not reveal their essential unity. The fact is, as pointed out on page 160, that the effects of beauty are satisfactory in the degree in which they are felt to accord with every possible influence exerted at the time when they are experienced. It is not too much to say that so far as they result from vibrations, or in connection with vibrations, some of these are beyond the circumference of conscious experience; but all of them, nevertheless, like the minutest and most distant waves upon a pool, moved as in our first illustration, seem at the time to be proportional parts of a universal rhythm. Often, in fact, they seem to be, and possibly, to an extent, they always are, parts of that larger rhythm which, coming down through life and death, winter and summer, waking and sleeping, inhalation and exhalation, pulse-throb and stillness, extend back through the alternating effects of metre and proportion, tone and hue, to others of a nature almost infinitely subtle, but which are just as necessary to the life of the spirit as the beat of the heart to that of the body. To this conception of beauty the idea of sensational ease or assimilation is necessary as an accompanying effect; but it is a question whether, considered even as a point of departure for development, the idea includes all that is in the germ, or in that part of it which most clearly reveals the originating cause. One could not be conscious of the thrills of pleasure connected with doing a deed of disinterested kindness, were it not for unimpeded processes in the circulatory systems of his physical organism. But these do not account for all the effects entering into such an experience or possible to it, even if, as at times in the presence of beauty, it awaken a sense of nothing not distinctly physical. A cause to be satisfying must be capable of accounting for all the facts. Can this be affirmed of the processes that have been mentioned? Are they not rather effects accompanying others which, in connection with these, are attributable to something deeper in essence and more comprehensive in applicability?

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